

THE PIG PEN SITE  
ARCHEOLOGICAL INVESTIGATIONS AT 9RI158  
RICHMOND COUNTY, GEORGIA

Prepared for

Georgia Department of Transportation  
Office of Environment/Location  
Atlanta, Georgia

by

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## ABSTRACT

**T**his report presents the results of data recovery at 9Ri158, a multicomponent, prehistoric and historic site located on a ridge overlooking a section of shoals on the Savannah River, immediately north of Augusta, Georgia. Shovel tests, backhoe trenches, hand-excavated blocks, and machine-stripped blocks (totaling 831 m<sup>2</sup>) were excavated in the 18,700 m<sup>2</sup> project area to delineate site limits and to investigate features, midden, and activity areas. The site mostly consisted of a sparse plowzone mixture of Paleoindian through twentieth century artifacts. A partially intact Archaic period midden deposit was encountered on the eastern edge of the project area, producing several rock hearths associated with the site's predominant Late Archaic/Early Woodland component. This area also contained several intrusive Late Mississippian Lamar pit features. Low artifact density and tool diversity suggests that the site was infrequently used until the Late Archaic period when both of these indices substantially increase. However, the sparseness of Late Archaic features and near absence of pottery indicate that the site was not an intensive habitation site. 9Ri158 is a portion of a greater site area that contains three other known sites. The Late Archaic/Early Woodland occupation is likely centered at one of these other adjacent sites. 9Ri158 also contains an early nineteenth century component and extant twentieth century structures and features.



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## INTRODUCTION

9Ri158, the Pig Pen site, is an extensive, multicomponent site located on a high bluff overlooking the Fall Line shoals of the Savannah River. The site has been intensively plowed, but an Archaic midden deposit has been preserved along the eastern edge of the project area. Mississippian pits are present, as well as standing twentieth century structures. This report presents the methods and results of a data recovery project that focused on the prehistoric occupation of the site. The recovery of early nineteenth century artifacts, however, suggested the utilization of the site during that period. As a result, detailed archival research was also conducted.

9Ri158 was initially identified during a Georgia Department of Transportation (DOT) archeological survey for the proposed corridor of the Murray Road Extension Project in Augusta, Georgia (Bowen 1984). The DOT located eight archeological sites along the 7 mi corridor. Five of these sites, including 9Ri158, were in the 3.5 mi section that parallels the Savannah River (Figure 1). Bowen (1984) tested 9Ri158 with six shovel tests and two motor grader strips (18 and 50 m long) revealing four apparent cultural features. Bowen concluded that 9Ri158 contained the potential for yielding significant data on the Late Archaic, and perhaps other time periods as well, and was thus potentially eligible to the National Register of Historic Places. He described the site as follows, using temporary site number 9Ri(DOT)29:

This site is situated on a long, broad bluff overlooking the Savannah River to the east. In the past this bluff was continuous, stretching for a mile along and rising thirty feet above the river. Now the bluff has been segmented by several intrusions including the Augusta Canal, the Seaboard Coast Line Railroad, Eisenhower Park, Eisenhower Drive, and several residential and public/commercial structures. Today the site is roughly bounded by the canal to the east, the railroad to the south and west, and the graded park to the north. Topographically, these boundaries are more tightly constricted to an area approximately 200 feet east-west by 800 feet north-south, or four acres. The present use of the site is cow pasture, pig pen, and fallow field/garden. An abandoned house and partially demolished barn occupy the southwestern section of the site.

The site was located and defined by surface collection and shovel tests. Intensive relic collecting has apparently taken place as only broken and select specimens were visible on the surface. These did, however, give an indication of the areal extent of the site. Shovel testing within the site boundaries revealed a reddish-to-medium brown clay loam plowzone ranging from about 0.5 to 1.0 foot thick underlain by red-to-reddish brown orange cohesive clay. While these



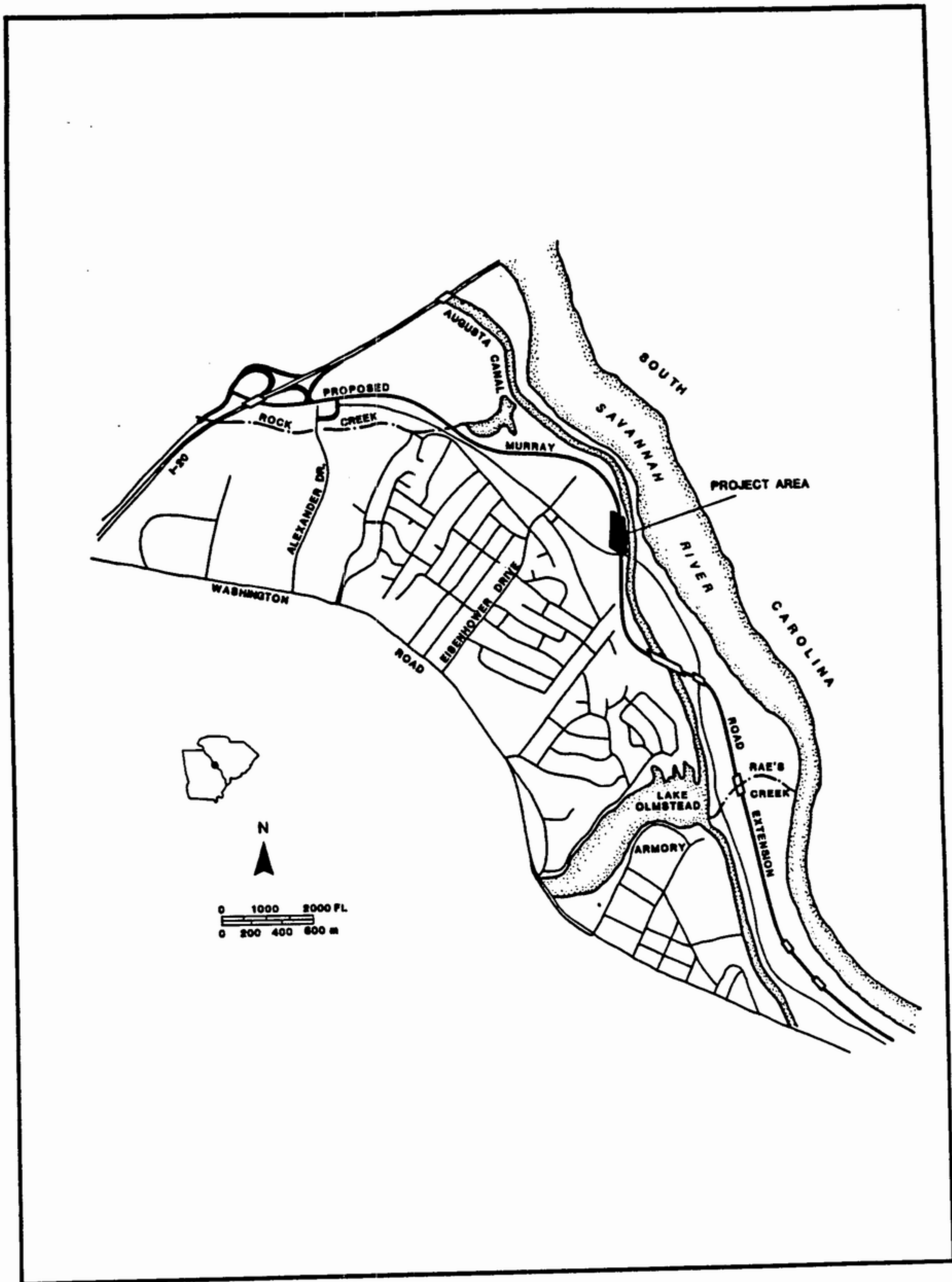


Figure 1. Location of Project Area.



tests failed to reveal any buried cultural strata, one test bisected a subsurface intrusion (origin unknown) indicating, along with the surface remains, the potential for subsurface features in the clay subsoil. [Bowen 1984:9-11]

The DOT contracted with Southeastern Archeological Services, Inc. (SAS), to conduct data recovery within the proposed impact zone of 9Ri158. The excavation strategy and research design was developed in accordance with Bowen's (1984) assessment of the site's research potential and preservation status. Principally, Bowen noted that (1) there were relatively few diagnostic artifacts due to collector activity, (2) there were few (if any) buried cultural deposits in the project area, and (3) there were preserved sub-plowzone features that would probably be the most valuable source of data. The research design and methods thus focused on the stripping of plowzone in large blocks so as to expose features and patterns of features. This strategy was modified slightly during fieldwork when preserved, buried cultural deposits were discovered in a portion of the site.

Field work was conducted from July 14 to July 31, 1987, with Thomas H. Gresham as principal investigator and R. Jerald Ledbetter as project director. Crew members included SAS staff Jean Spencer and Charlotte A. Smith and field archeologists Ron Schoettmer, Ronnie Rogers, Jeff Price, Rob Benson, and Kerstin Weis. A total of 80 person days were spent in the field.

## Site Setting

9Ri158 is located in the northeastern corner of Richmond County, Georgia, an area of rapid suburban expansion. Washington Road, which lies west of the site, is a major artery into Augusta. While there has been significant encroachment from subdivision development, most of the site area has been maintained for agriculture.

The site lies at the lower edge of the Piedmont or Crystalline Geologic Province. The bedrock of the area is characterized by igneous and metamorphic material. The specific site area is underlain by bedrock composed of meta-argillite/phyllite (Georgia Department of Natural Resources 1976). The upper edge of the Coastal Plain, known as the Fall Line Hills, begins approximately 2 km south of the project area.

The project area lies on an elongated, ridge-like bluff above the Savannah River that extends from Rock Branch to Warren's Spring Branch, a distance of 2.2 km. The ridge is composed of highly acidic alluvial soils of the Wickham urban complex deposited on underlying bedrock (Paulk 1981). The project area occupies the ridge crest along with the slope facing the river and part of the backslope (Figure 2). The shape of this ridge-bluff (Figure 3) shows that the project area is about 15 m above and 40 m away from the river's edge. The canal and railroad have artificially divided a large occupation area into several sites (Figure 4). The area encompassing 9Ri158--9Ri(DOT)25, 9Ri(DOT)27, and 9Ri(DOT)28--will subsequently be referred to as the greater site area.



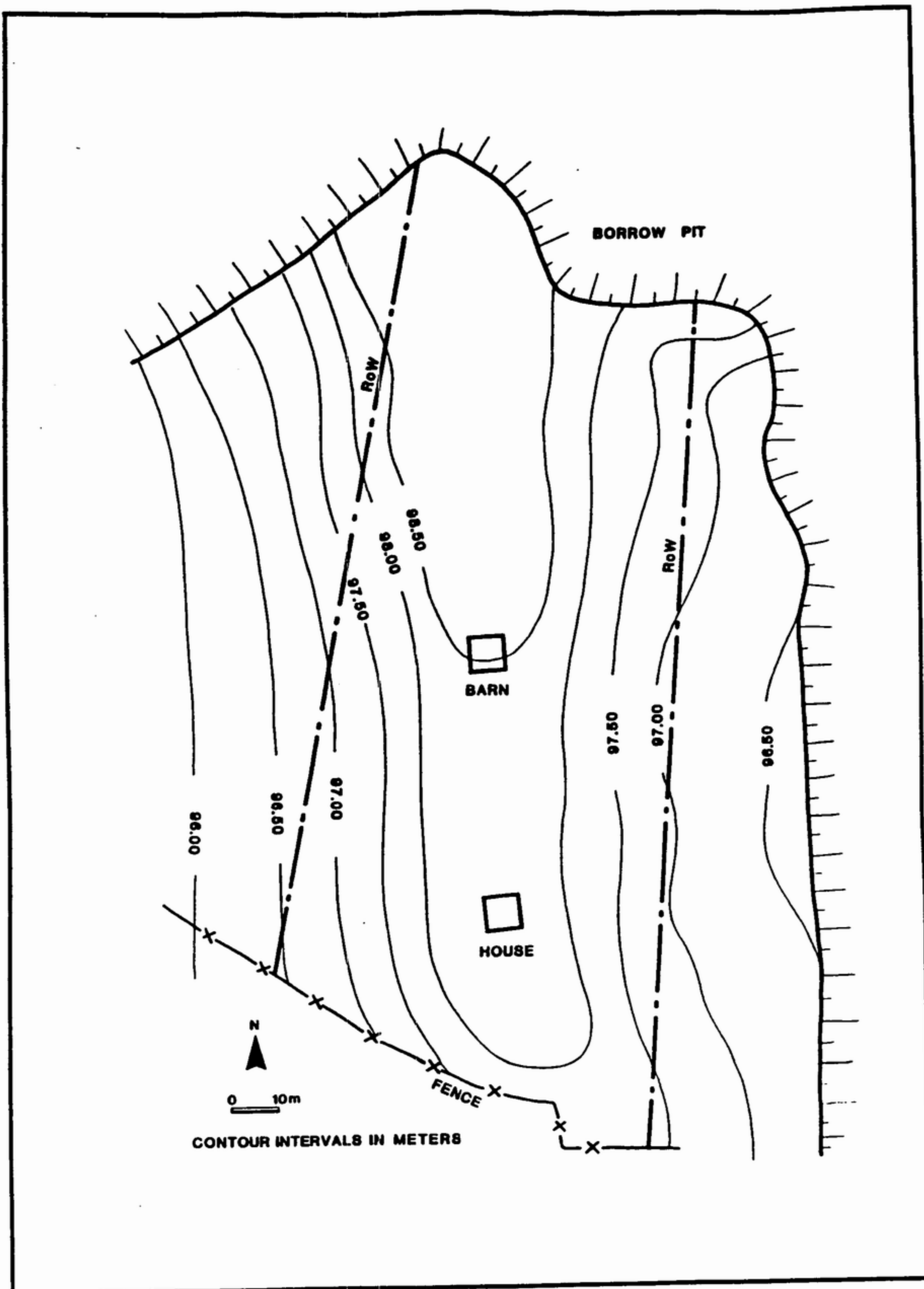


Figure 2. Contour Map of the Project Area.



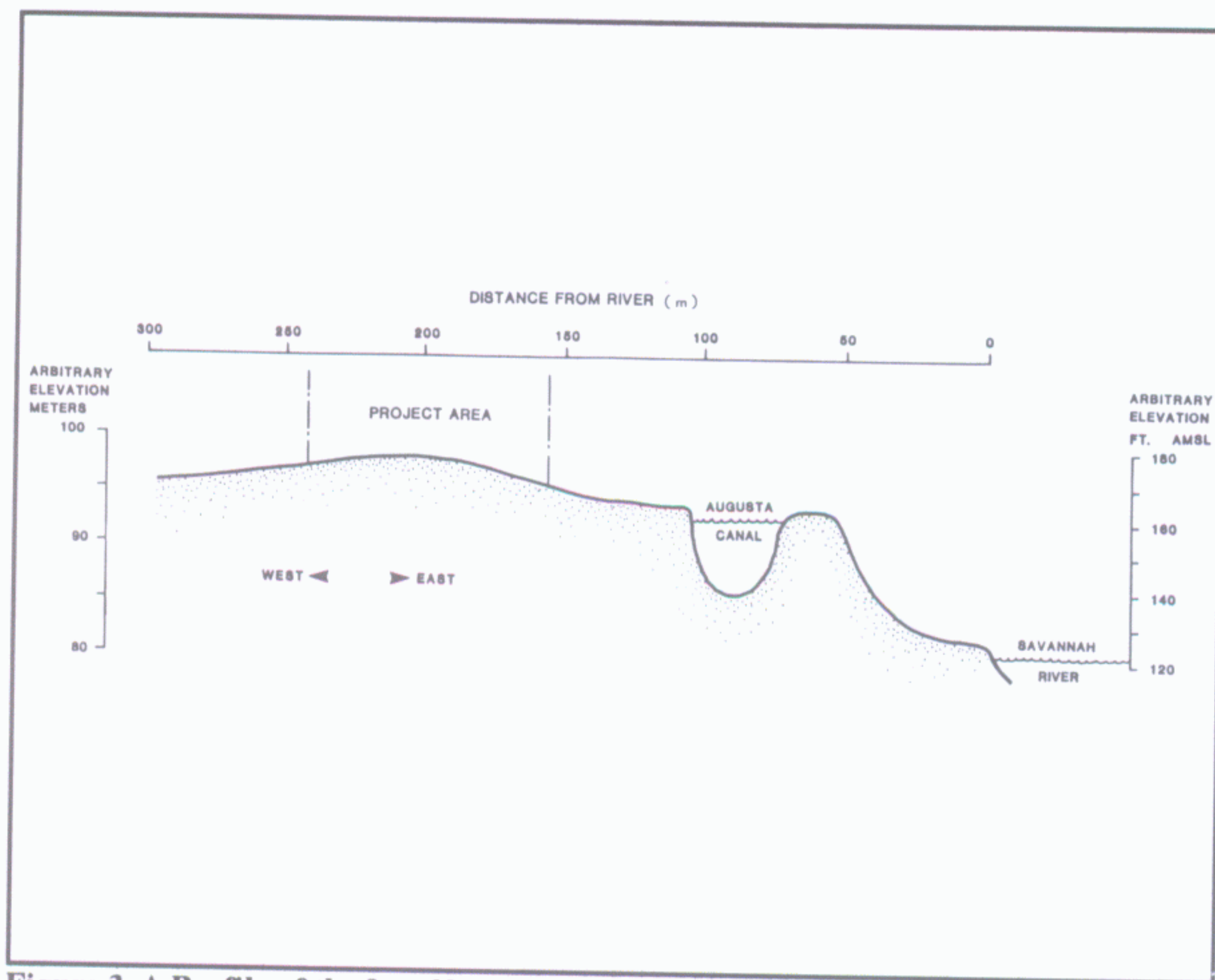


Figure 3. A Profile of the Landform Containing 9Ri158.

The portion of the Savannah River adjacent to the project area is locally known as the cataracts or falls. The river at this point and to the south at Augusta is described in an eighteenth century account by William Bartram:

**The village of Augusta is situated on a rich and fertile plain, on the Savanna river; the buildings are near its banks, and extend nearly two miles up to the cataracts, or falls, which are formed by the first chain of rocky hills, through which this famous river forces itself, as if impatient to repose on the extensive plain before it invades the ocean. When the river is low, which is during the summer months, the cataracts are four or five feet in height across the river, and the waters continue rapid and broken, rushing over rocks five miles higher up: this river is near five hundred yards broad at Augusta. [Van Doren 1928]**

The vegetation zone of the general site area, an oak-pine forest, is a transitional zone between the northern oak-hickory forests and the southern evergreen forests of the Coastal Plain (Hodler and Schretter 1986:52). These upland and floodplain forest communities provided a rich and varied environment for an abundance of terrestrial animal species. The shoals were extremely productive in aquatic resources, especially with regard to migratory fish (Chapman 1897:104).



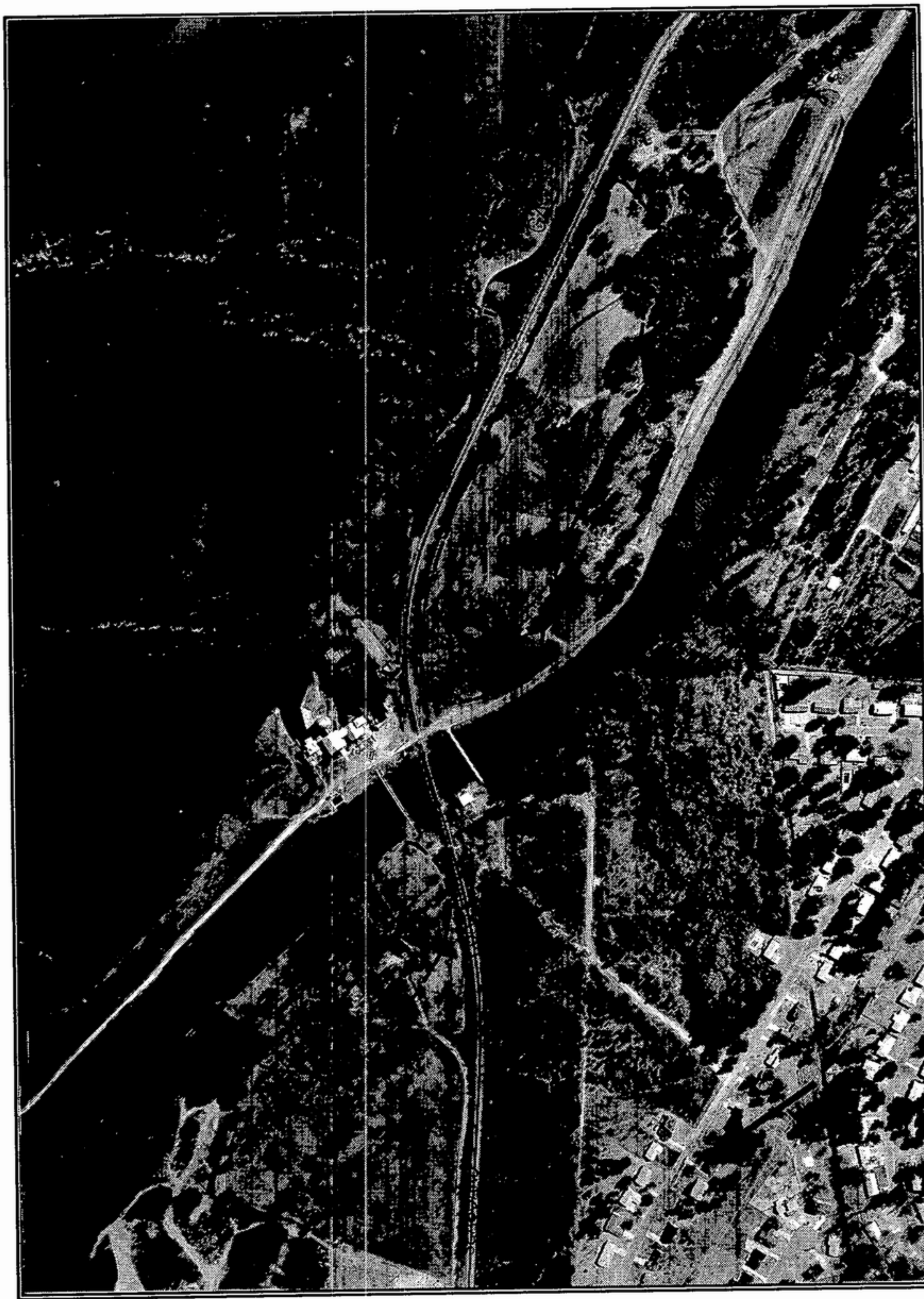


Figure 4. Aerial View of the Greater Site Area Including 9RI158, 9RI(DOT)25, 9RI(DOT)27, and 9RI(DOT)28.



## ARCHEOLOGICAL BACKGROUND

### Previous Research

The earliest investigations along the Savannah River concerned the recording and excavation of mounds (Thomas 1894; Moore 1898). Clarence B. Moore's (1897-98) work is considered the first "scientific" archeological investigation of the Savannah River between Savannah and Augusta. Moore (1898:167) was not impressed by the Savannah River Valley, noting that many of the reported mounds had been previously looted or were only circular banks thrown up by the river. The few mounds found away from the river were small and seemed made for domiciliary purposes. Moore (1898:167) stated that "No mounds of which we heard, however, except one on which stood a house, were left uninvestigated." In all, Moore investigated 13 mounds along the river, 11 of which were found within the counties of Burke and Screven in Georgia and Barnwell in South Carolina.

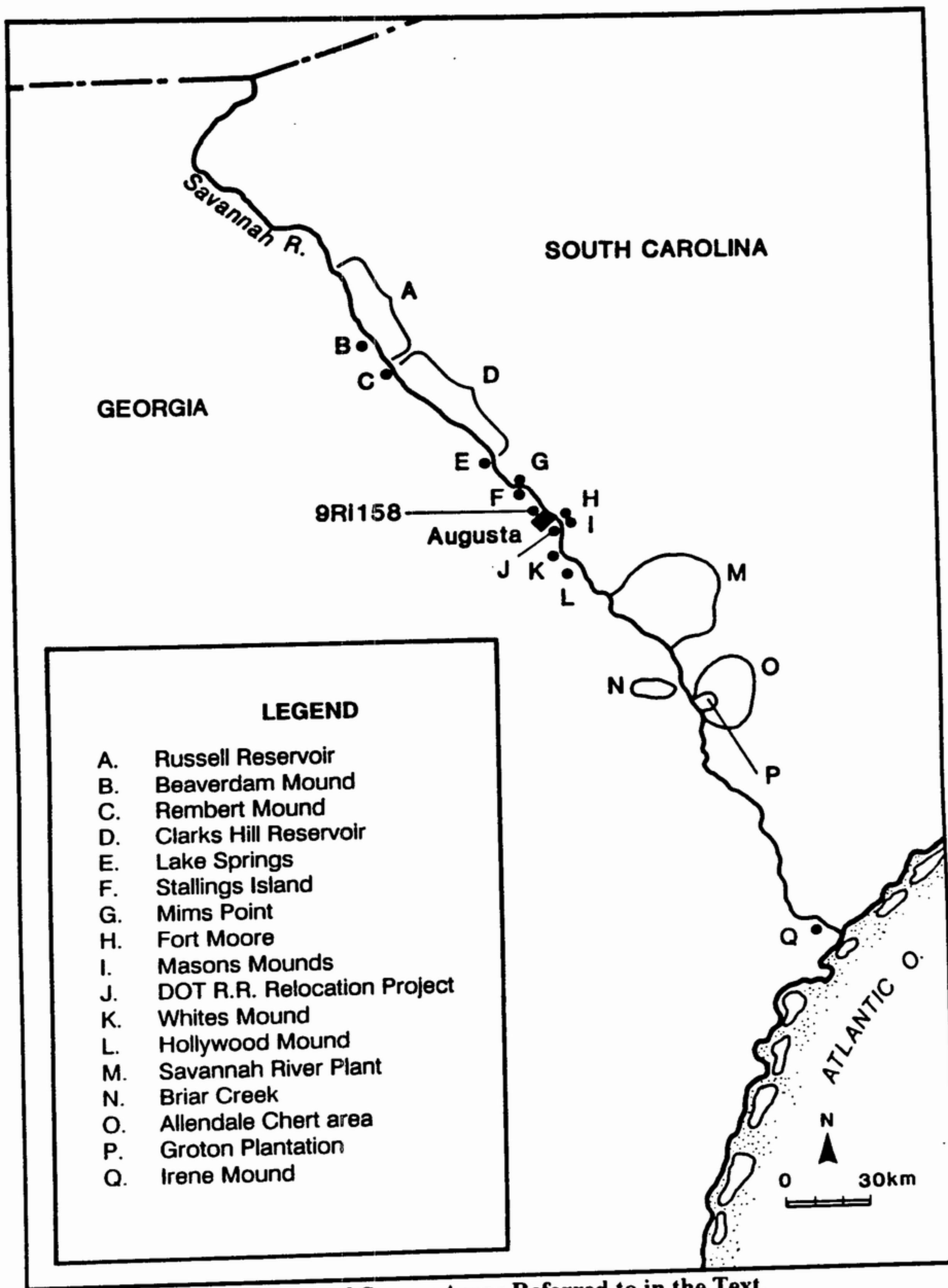
The mound complex closest to the project area was Mason's Mound (Jones 1873). This mound group was located on the South Carolina side of the Savannah River opposite Bush Field in southeast Augusta (Figure 5). According to Moore (1898), the mounds were destroyed by Savannah River freshets.

Other nineteenth century investigations include C.C. Jones' (1873, 1880a, 1880b) and Steiner's (1899) observations of aboriginal activities on Kiokee Creek north of Augusta. In the twentieth century, several mounds along the Savannah River were excavated. These included WPA excavations at Irene Mound near Savannah (Caldwell et al. 1941), and later work at Rembert Mound in Clarks Hill Lake (Miller 1948), Hollywood Mound south of Augusta (DeBaillou 1965), and Beaverdam Mound in Russell Reservoir (Rudolph and Hally 1985).

In the 1920s Claflin (1931) excavated the Stalling's Island site on the Savannah River north of Augusta. This initiated an archeological interest in Late Archaic shell mounds. Subsequent excavations at Stalling's Island have expanded upon Claflin's early work (Fairbanks 1942; Sears and Griffin 1950; Bullen and Green 1970). Further investigations of the Stalling's Island complex have been carried out within the central Savannah River area at Rabbit Mount on Groton Plantation (Stoltman 1974), at the Lake Springs site (Miller 1949), and at White's Mound (Phelps and Burgess 1964).

Claflin (1931:41) also identified several smaller Archaic shell midden sites below Stalling's Island. Claflin's sites 3 (Elliott 1983) and 8 (Bowen and Robertson 1984) have recently been tested. The latter site, also known as 9Ri(DOT)27, is of particular interest because it lies only 150 m southeast of the project area.







Prior to recent, large-scale cultural resource management projects, excavations dealing with periods other than Late Archaic or Mississippian were infrequent. Middle Archaic sites, referred to as the "Old Quartz Culture," were excavated at Lake Springs (Caldwell 1954) and Westo Bluff (Neill 1966). Brockington (1971) investigated the Theriault site, a stratified, quarry-related Archaic deposit on Briar Creek. Groton Plantation (Stoltman 1974; Peterson 1971) investigations resulted in excavated data for a variety of aboriginal occupations. Historic excavations include work at Fort Moore (Joseph 1971; Polhemus 1971) and the Galphin Trading Post at Silver Bluff (Neill 1968).

Recently, several projects have resulted in extensive excavation along the Savannah River. The DOT Augusta Railroad Relocation Project in Richmond County (Elliott and Doyon 1981) produced a variety of testing-level archeological data, the most significant of which concerned Early and Late Archaic occupations. To the north, the Russell Reservoir investigations included the large scale excavation of a number of significant prehistoric and historic sites. South of Augusta, excavation and testing associated with construction of the Plant Vogtle Power Plant facilities along Briar Creek resulted in significant sampling of a number of Archaic and Woodland sites (Elliott and O'Steen 1987a). Survey, testing, and excavation at the Savannah River Plant in South Carolina have, to date, produced a substantial body of archeological data (e.g., Hanson et al. 1978). Goodyear and Charles (1984) tested several quarry sites during a relatively intensive survey and testing of chert quarries on the Savannah River below Augusta.

A number of smaller surveys and testing programs have also been conducted during the past two decades in the central Savannah River area. These surveys, which are often conducted along transects several miles in length, are producing the first specific inter-riverine archeological information on a regional scale. Surveys within Richmond County have been conducted by Ferguson and Widmer (1976), Garrow et al. (1978), Bowen (1978, 1979, 1984), Bowen and Robertson (1984), Ledbetter and Doyon (1980), and by Campbell et al. (1980) at Fort Gordon. A substantial number of sites have been recorded during the past two decades by the Augusta Archeological Society (Lewis 1987). Within a several county area, surveys have been conducted by Goodyear (1978), Hanson et al. (1978), Taylor and Smith (1978), Elliott (1986), Cridlebaugh (1983), Gresham (1985), and Ledbetter et al. (1985).

The prehistoric cultural sequence in the Augusta area reflects general Southeastern trends. The work of Caldwell and Waring along the Georgia coast and Savannah area set the basis for understanding the Woodland and Mississippian traditions (Caldwell and Waring 1939; Waring and Holder 1968; Williams 1968). Coe (1964) and Wauchope (1966) have provided significant data from the Piedmont, directly applicable to the present study area. The Archaic sequence developed by Coe (1964) for Piedmont North Carolina is still the basis for a regional typology.



Recently, attempts at interpretation and synthesis of the cultural history of the Savannah River Valley have been made. Papers dealing with Savannah River settlement include Anderson et al. (1986), Sassaman (1985), Alterman (1985), Wood et al. (1985), Hanson and DePratter (1985), Hally and Rudolph (1986), and Sassaman et al. (1987).

## **Culture History**

**Paleoindian Period 10,000-7800 B.C.** The first inhabitants of the central Savannah River Valley lived in an environment of climatic equability without summer and winter temperature extremes, in which tropical and boreal species coexisted (Holman 1985). The patchy, park-like boreal forests were gradually replaced by northern hardwoods during this period, while the upper Coastal Plain was already covered by hardwood forest (Delcourt and Delcourt 1983). Large herd animals, including now extinct megafauna, were exploited as well as smaller game, fish, and plants.

The diagnostic artifacts of this period include formalized unifacial scraping and butchering tools and bifacial lanceolate projectile points. The early part of the period is identified by Clovis, Suwanee, and Simpson lanceolate points, while the later transitional period is defined by Dalton points.

Research on the Paleoindian period in the region has been concerned with problems of typology and site distribution. Limited site-specific data suggest that the Piedmont and Coastal Plain may contain a few intensively occupied sites, but were generally dominated by small camps of low artifact density and quarry related sites (Anderson et al. 1987).

Distributional studies (Anderson et al. 1987; Charles 1986) illustrate a concentration of reported Paleoindian points near the Fall Line of the Savannah River. These points lie primarily in areas of dense lithic resources, specifically the Carolina Slate Belt zone of the lower Piedmont and the Allendale chert deposits of the upper Coastal Plain. The association of the Allendale deposits with Paleoindian quarrying activities has been a focus of recent investigation (Goodyear and Charles 1984).

Data from excavations in the Savannah River area (Anderson and Schuldenrein 1985; Wood et al. 1986) and various surface finds seem to identify very low density, limited activity sites. However, the Taylor Hill site (Elliott and Doyon 1981) in the Phinizy Swamp area of Richmond County may be an exception. This site is large, approximately 100 ac, and has produced several Paleoindian points. Taylor Hill may represent the only known example of a Paleoindian residential site in the area.

**Early Archaic 7800-6000 B.C.** The environment of the Piedmont during the Early Archaic was apparently similar to that of today. The mesic oak-hickory forests were probably well established about 7800 B.C. This more homogeneous environment led to changes in human adaptations that are visible in the archeological record.



Diagnostic artifacts for this period are unifacial tools, essentially unchanged from the Paleoindian period, plus new varieties of projectile points. Projectile points associated with the period include Big Sandy or Taylor side-notched, Palmer and Kirk Corner Notched, bifurcate-based LeCroy, and Kirk Stemmed. The central Savannah River region has produced an abundance of early point styles, dominated by Palmer/Kirk Corner Notched and Taylor points, but very few of the later LeCroy or Kirk Stemmed points. This implies that the region, just as elsewhere in the Southeast, should not be viewed in terms of stable and ever expanding populations. Rather, the Early Archaic, as well as all remaining periods, should be viewed with respect to population fluctuations.

Early Archaic settlement in the Southeast is characterized by large, intensively occupied base camps or aggregation sites (Coe 1964; Chapman 1975, 1977) and numerous small sites that may contain only a few artifacts. Excavation data from these major sites has produced evidence of varied activity and diverse resource use suggesting long term, probable seasonal, or multiseasonal use. The smaller sites are viewed as short term seasonal or specialized logistical sites (Anderson et al. 1987). Larger sites have been found primarily in floodplain settings while small sites are found in both floodplain and upland settings.

There have been several attempts to interpret Early Archaic settlement in the Southeast (Chapman 1975; Claggett and Cable 1982; O'Steen 1983; Anderson and Hanson 1985). The primary contentions of these models are the extent of band and macro-band territories, the degree of sedentism or residential mobility and the degree to which these people practiced logistical versus generalized foraging economy.

**Middle Archaic 6000-3000 B.C.** This period corresponds to the climatic episode known as the Hypsithermal Interval and may have been somewhat drier than present. The Coastal Plain pine forest became established during this time (Carbone 1983:9).

The Middle Archaic is identified by stemmed points that include Stanly, Morrow Mountain, Halifax, and Guilford, as defined by Coe (1964). The latter part of the period contains side- and corner-notched points of the Halifax and Benton types. With the exception of Stanly, all of these point types are difficult to classify because of similarities to points and bifaces of both earlier and later periods. Morrow Mountain and Guilford often refer to any poorly executed, rounded stemmed bifaces. Late Middle Archaic points presently identified as Benton apparently have been confused with Early Archaic Kirk Corner Notched points (Sassaman 1985).

The Middle Archaic in the Piedmont was once called the "Old Quartz Culture" (Caldwell 1954:37-39), a name that came to refer to almost any upland lithic scatter containing ovate bifaces. Even today there is a prevalent view that Middle Archaic sites are present on nearly every hilltop in the Piedmont, and the Middle Archaic of the Savannah River Valley is synonymous with the term Morrow Mountain. Stanly points, like the preceding LeCroy and Kirk Stemmed, are found infrequently in the valley. Guilford and Benton points are generally associated with a transitional period, with more similarities to the Late Archaic.



With the exception of the excavations of Coe (1964) in North Carolina, Chapman (1977) in Tennessee, and Windy Ridge (House and Wogaman 1978) in South Carolina, there is little excavated data useful in characterizing the Middle Archaic. Most interpretation has been based on extensive surface collections from South Carolina (Blanton and Sassaman 1985; Sassaman et al. 1987). The Middle Archaic of Piedmont South Carolina is characterized by an abundance of small sites with redundant tool assemblages. Essentially, the Middle Archaic people lived in nomadic groups practicing generalized foraging in a homogeneous environment (Blanton and Sassaman 1985; Sassaman et al. 1987). In contrast, recent excavation data from Georgia and South Carolina suggests similarities to Early Archaic behavior traditions as demonstrated by a highly curated tool assemblage (Ledbetter et al. 1985; Elliott 1987). The latter part of the period is interpreted primarily from data from the Pen Point site in the upper Coastal Plain. Benton points were found in contexts that indicated point surpluses, an idea that supports an interpretation of production for exchange (Sassaman et al. 1987).

**Late Archaic 3000-1000 B.C.** Along the Savannah River, this period is marked by the introduction of pottery, the earliest evidence of horticulture, the possibility of sedentism, craft specialization, and the intensive exploitation of shellfish and aquatic resources. However, shell middens may have biased our interpretations of the Late Archaic since shell remains tend to counteract acidic soils, allowing preservation of organic remains. Shell middens have been used as evidence of increased sedentism but they may, in fact, be evidence of seasonal exploitation (Dye 1976). Shell midden sites have been the focus of research in the region, but these sites represent a minority of known Late Archaic sites.

Although the Late Archaic period has been divided into three phases, Stallings I, II, and III (Stoltman 1974), most researchers now distinguish two divisions. A preceramic period characterized by large Savannah River points is defined as the Savannah River phase (Coe 1964), while a second, exhibiting plain and then decorated fiber-tempered ceramics, is referred to as the Stallings Island phase. Changes in projectile point styles and overall tool assembly between Late Archaic preceramic and ceramic phases have been noted for the upper Piedmont (Wood et al. 1986). Also, lithic preference, as indicated by Stallings Island site data, shifted from the use of metavolcanics during the preceramic phase to the use of quartz, chert, and metavolcanics during the ceramic phase (Bullen and Greene 1970). This pattern of lithic preference may not be universal within the Savannah River Valley, since sites dating to the preceramic Late Archaic period in the Russell Reservoir did not exhibit this predominance of metavolcanic points (Wood et al. 1986). Point styles evolved from broad, square-stemmed to smaller points with variation in stem shape that correspond to such types as Gary, Otarre, and Flint Creek.

The Late Archaic has been viewed as a period of reduced territories and increased trade (Sassaman et al. 1987). Decreased territory size is implied by the intensive use of locally available lithic raw materials. The predominance of metavolcanic tools on sites near Stallings Island is used as a primary example. The increased use of Coastal Plain chert on these same sites later in the period and the widespread distribution of soapstone in the Coastal Plain may be evidence of trade (Sassaman et al. 1987).



Late Archaic settlement patterns in the central Savannah River Valley reflect the use of riverine resources. During the ceramic phase, there is ample evidence of the widespread use of tributary valleys. Upland occupation appears to be minimal. Recent cultural resource management surveys from the Fall Line Hills (Campbell et al. 1981) and upper Coastal Plain (Hanson 1982; Elliott and O'Steen 1987b) reveal that there are also numerous specialized and possible habitation sites located along interior tributary streams.

**Woodland Period 1000 B.C. - A.D. 1000.** This period has been poorly researched in the Savannah River area. The exception is the Early Woodland Thoms Creek or Refuge phase that appears relatively unchanged from the Late Archaic. Traditionally, the Woodland period is characterized by extensive use of ceramics, increased reliance upon agriculture, ceremonialism as shown in burial mound construction, and permanently occupied villages.

The earliest Woodland occupation in the area is identified by sand-tempered Thoms Creek and Refuge pottery. This pottery is very similar to the preceding Stalling's Island ceramics except for tempering agents. Thoms Creek phase tools, including projectile points, are essentially unchanged from those of the Late Archaic. Numerous Thoms Creek phase sites are recorded in the area. Some evidence points to greater settlement intensity along the smaller tributaries and shifts in resource exploitation (Hanson and DePratter 1985; Hanson 1982).

Although the Woodland period has not been thoroughly investigated in the immediate area, generalizations can be drawn from the overall Woodland tradition. There was a shift during Middle Woodland to triangular projectile points and changes in ceramic decorative styles to fabric marking, check and simple stamping, cord marking, and complicated stamping. Hanson and DePratter (1985) have separated the Savannah River Valley at the Fall Line between Piedmont and Coastal Plain ceramic traditions.

**Mississippian Period A.D. 1000-1540.** This period is characterized by increased political and ceremonial sophistication. Few Mississippian sites have been located in the Fall Line region of the Savannah River. Therefore, little information about this period is available.

A mound group, assumed to be Mississippian, formerly existed just below Augusta on the South Carolina side of the river, but the site was destroyed by Savannah River freshets (Moore 1898). Research from the Piedmont (Anderson et al. 1986; Hally and Rudolph 1986) suggests that portions of the valley were intensively occupied during the time identified by Savannah and Early Lamar ceramics, approximately A.D. 1100 to 1450. The valley was apparently abandoned after that time.

**Historic Period A.D. 1540 to the Present.** Recent research from the inner Piedmont (Ledbetter and O'Steen 1986) and recent excavation from the Clarks Hill area (Wood and Smith 1987) provide evidence for the presence of post-contact Lamar occupation in previously abandoned areas. These late Lamar sites may be refugee sites resulting



from the political breakdown of Lamar chiefdoms following initial Spanish contact. With the collapse of political control and the spread of European diseases, there was apparently a dispersal of populations away from the large Lamar towns.

Hernando DeSoto crossed the unpopulated Savannah River Valley near Augusta during the spring of 1540. Hudson et al. (1984:65-77) place this crossing point near Silver Bluff to the south of Augusta, but recent research is suggesting that the crossing point actually may be located at the shoals just north of Augusta very close to the project area (J. Mark Williams, personal communication, 1988).

No historic documentation exists for aboriginal occupation of the Augusta area until the latter seventeenth century, during the early colonial slave and deerskin trade. Various Indian groups from throughout the Southeast lived near Augusta during the late seventeenth and eighteenth centuries (Swanton 1946:13).

Augusta was established as an unauthorized trade settlement prior to Georgia's establishment as a colony in 1733. Augusta quickly became the focus of interior settlement after the town was officially established as Fort Augusta in 1735. Augusta was a thriving trading town. Later, further settlement was encouraged by the establishment of St. Paul's Parish in 1758. Richmond County was created from St. Paul's Parish in 1777.

Augusta and Richmond County have a rich and complex history that cannot be summarized here. Detailed accounts, however, are provided by Jones and Dutcher (1890) and Cashin (1980, 1986).



# RESEARCH DESIGN AND METHODS

## Research Design

**B**owen (1984) characterized 9Ri158 as a large plowzone site containing preserved, "subsoil intrusions of prehistoric origin." The site's structure, integrity, research potential, and significance are summarized as follows:

Based on the materials recovered from both surface and subsurface contexts the major occupation at the site appears to be Late Archaic with an unidentified pottery-bearing (Woodland?) component also represented. Both components would be significant for additional investigation. The Late Archaic Period in the Central Savannah River Area (CSRA) is primarily known from riverine shell midden sites (cf. Claflin 1931 and Fairbanks 1942). To obtain a fuller understanding of the time period and culture, however, it is essential that data also be gathered on non-shell midden and upland sites (cf. Bowen and Robertson 1984 and Elliott and Doyon 1981).

Despite the rich archaeological heritage of the CSRA, most investigations have focused on the Late Archaic Period, and this research is, for the most part, dated. It is, therefore, important to obtain, whenever possible, information on the time periods preceding as well as those following the Late Archaic, so that a continuing or changing of prehistoric lifeway-patterns may be discerned. Because of the location of several subsurface intrusions representing intact cultural features, 9Ri(DOT)29 [now 9Ri158] contains the potential for yielding data significant in a local/regional prehistoric context. For this reason, 9Ri(DOT)29 [9Ri158] is being suggested for Determination of Eligibility to the NRHP. [Bowen 1984:14-15]

In accordance with this assessment and in consultation with DOT archeologist Rowe Bowen, Southeastern Archeological Services, Inc., developed a research design geared to the efficient excavation of an essentially plowzone site. The focus was on the discovery and full analysis of features and the analyses of site function and chronology based on artifacts. The primary research objective was to fully characterize the nature of the Late Archaic occupation of the site. It then could be compared to other nearby Late Archaic sites, in particular to riverine shell midden sites. The second major research objective was to explore other occupations of the site so as to balance the pre-existing focus on the Late Archaic. Bowen recovered aboriginal sherds (tentatively ascribed to the Woodland period) and recognized that the remains of several cultural periods could be preserved in features.



The focus of the field investigations was to recover as large a sample of features as possible. Therefore, the first stage of fieldwork was to determine which areas of the site contained the highest density of features. After staking grid lines and mapping the landform, the site would be investigated by the excavation of approximately 70 shovel tests placed at 10 m intervals across the project area. These shovel tests would provide a quantified sample of plowzone artifacts and identify areas of highest artifact density. Presumably, these high density areas would correlate with areas of high feature density.

After preliminary analysis of the contents of the shovel tests, heavy machinery would strip the plowzone in high density areas to expose features. A minimum of 300 m<sup>2</sup> was to be exposed in this manner. The remainder of field time was to be directed toward the excavation and recording of these features. This excavation plan was modified during the first week of fieldwork, after consultation with DOT archeologist Rowe Bowen. The change in strategy was necessary for two reasons. First, drought conditions had hardened the plowzone to the extent that picks were required for excavation. In addition to being extremely destructive to artifacts, the time required for shovel testing by this method was prohibitive. Second, an area of preserved midden was identified at the eastern edge of the project area. Effective investigation of this deposit could not be accomplished by machine stripping alone.

The modifications in field strategy consisted of the following:

- 1) Reduction in the number of shovel tests to two parallel north/south lines running the length of the project area and one perpendicular east/west line. Twenty meter intervals would be used for the north/south line and 10 m intervals for the east/west line.
- 2) Excavation of systematically placed backhoe trenches across the site. Samples of trench fill recovered from the backdirt piles would be screened to compensate for the loss of shovel test artifact data.
- 3) Hand excavation of small blocks on the portion of the site containing the remnant midden following machine stripping of plowzone. The minimum area designated for machine stripping (300 m) was not reduced.

Subsequent analysis was to be directed toward the interpretation of the site's initially identified primary component, the Late Archaic/Early Woodland period. However, the Early Archaic component identified in the midden zone, two widespread historic components, and other minor components encountered during field excavation were included later.



## Field Work

The Pig Pen site project area was limited to a north-south segment of the Murray Road right-of-way, 250 m long and between 75 and 90 m wide (Figure 6). Most of this 18,700 m<sup>2</sup> project area was in pasture. Several standing sheds, a standing house, a demolished structure (probable barn), and trash piles obscured about 1200 m<sup>2</sup> or about 6% of the project area (Figure 7).

Two parallel lines staked at 20 m intervals were placed within the corridor along magnetic north/south. Using an arbitrary point of 500N and 500E, these two lines corresponded to 450E and 500E. A third staked line was run east-west at 500N. A vertical datum pin was placed in a tree near the center of the project area and assigned an arbitrary elevation of 100.0 m. All excavation units were placed within this grid system. A transit was used to place the corner stakes for each excavation unit and elevations were taken by transit using the arbitrary vertical datum.

Contour and plan maps of the project area were produced as baselines were established. Surface elevations were recorded at all stakes and along lines extending 50 to 100 m beyond the corridor. Surface features, such as structures, roads, and fences, were mapped and later compared to DOT aerial photographs.

Square shovel tests, 50 cm on a side, were placed at 20 m intervals along the two north-south lines and at 10 m intervals along the single east-west line. Since the soil was hard and dry, shovel testing was, in part, done with a pick (Figure 8). All soil was screened using 0.65 cm (0.25 in) mesh.

Generally, the results of the shovel tests were not consistent with expectations. Due to the hardness of the soil, the tests were extremely destructive to artifacts and extremely time consuming. At one point, it was estimated that virtually all of the field time would have to be used to excavate the 70 shovel tests. To remedy this situation, a smooth bucket backhoe that was to be used for stripping plowzone in block excavations was brought in for use in the systematic testing. The revised plan called for excavating east-west trenches at 40 m intervals along the north-south baseline with the backhoe (see Figure 6). Plowzone was excavated separately from subsoil and placed in separate piles (Figure 9). The equivalent volume of a 50 x 50 x 20 cm shovel test was screened from the piled topsoil at 10 m intervals along each trench.

The backhoe trenches not only provided systematically retrieved artifact samples required of the testing stage, but were a vast improvement over shovel tests in that features could be identified and soil changes discerned. The smooth bucket was used to carefully strip away plowzone to expose features. The rapidity of the excavation technique meant that faint subsoil stains could be recognized before they dried out and became indiscernible. The sharpness of the cut in the narrow trenches negated the need for shovel shaving. Trenches were excavated to the base of plowzone and then generally for 5 to 10 cm into subsoil to obtain soil profiles. Several deeper tests were excavated to identify soil anomalies, recover subsoil samples, and record deeper stratigraphies.



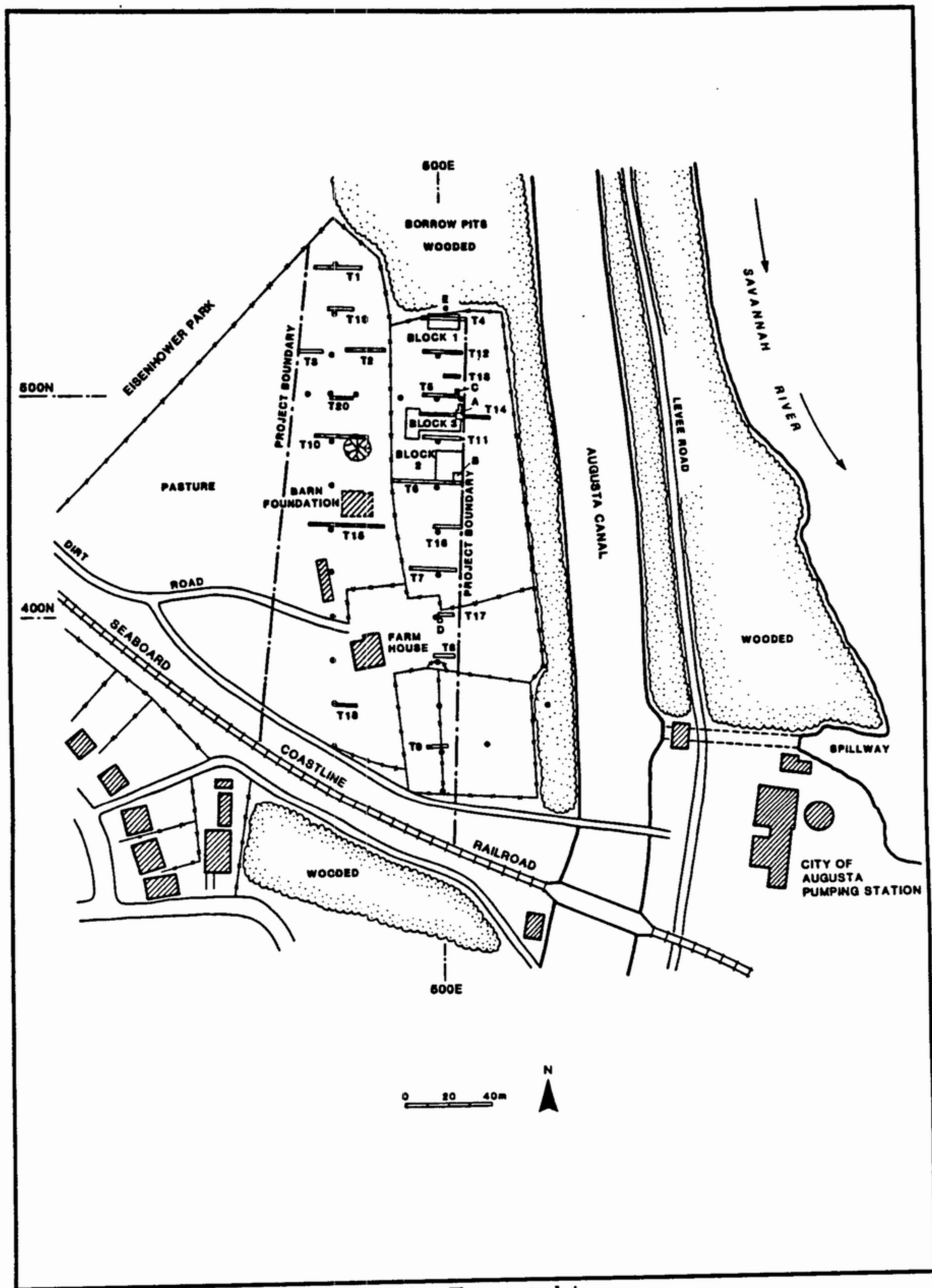


Figure 6. Map of Project Area Showing Excavated Areas.





**Figure 7. View of Project Area Showing Surface Conditions.**



**Figure 8. Shovel Testing Within the Project Area.**





**Figure 9. Test Trenching Using a Smooth Bucket Backhoe.**

Trenches varied in length depending on obstructions and the width of the project area (i.e., the right-of-way). The series of trenches at 40 m intervals was completed except for the area of the site containing standing structures. Promising areas of the site were further tested with closer intervals of trenching at 10 or 20 m intervals. Three of these areas were then expanded into block excavations.

Twenty backhoe trenches, 0.75 m in width and varying from 10 to 37 m in length, were excavated (see Figure 6). The combined lengths were 361 m, producing an excavated area of 271 m<sup>2</sup>. Forty-nine screened samples were taken to complement 28 excavated shovel tests.

The next stage of excavation was machine stripping large blocks to located features or preserved midden. Shovel test data were not useful in identifying specific high probability areas. No "hot spots" were revealed. The trenches uncovered numerous sub-soil stains, but nearly all were burned tree roots or modern post molds. The site, in fact, seemed to have a rather homogeneous artifact scatter resulting from extended plowing.

The extreme eastern edge of the site was the area of greatest potential because of intact deposits. Backhoe trenches in this area revealed soil profiles in which 10 to 15 cm thick cultural deposits were visible below the plowzone. This "midden" zone was only slightly darker than the overlying plowzone and, due to dry soil conditions, was difficult to distinguish from both the plowzone and the subsoil. The zone did contain features and was probably the only portion of the site that had not been plowed away.



Two methods of block excavation were conducted. In both cases, the backhoe was used to strip away the plowzone. In areas with probable intact midden deposit, small blocks were hand excavated (Figure 10). These blocks, designated A through E, were excavated in one zone (midden zone), in 1 m squares, and screened through 0.64 cm (0.25 in) mesh. Block B, however, was excavated in two levels. One flotation sample (0.05 m<sup>2</sup>) was taken from each excavation unit. The five hand-excavated blocks ranged from 4 to 21 m<sup>2</sup> with a combined area of 55 m<sup>2</sup>.

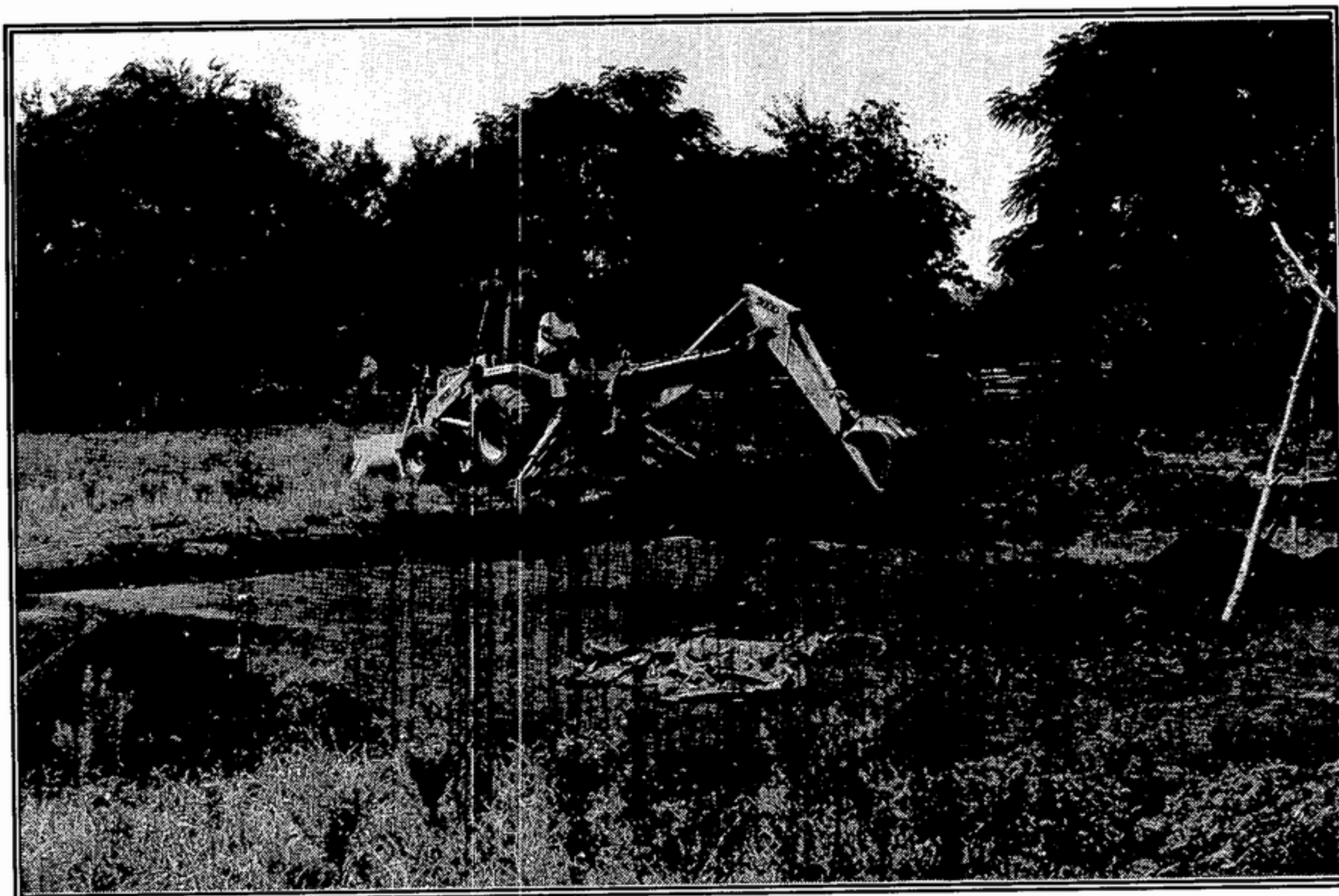
After mechanically stripping away the plowzone, hand excavated blocks were soaked with water and covered with plastic so that moisture could penetrate the baked soil. Only then could the units be excavated by standard shovel and trowel techniques.

Three large areas, designated Machine Blocks 1-3 (see Figure 6) were machine excavated (Figure 11). These blocks were also placed in the area of the site containing intact midden. The backhoe stripped away the plowzone and then slowly removed the underlying zone to subsoil. By stripping slowly and by having several persons carefully watching the excavation, features could be immediately recognized. The machine-stripped blocks were then soaked with water and shovel shaved so that all subsoil stains could be recognized.



Figure 10. Hand Excavated Block A. *View to the North.*





**Figure 11. Machine Stripping of Block 2. View to the east.**

Block 1, covering 112 m<sup>2</sup>, was arbitrarily placed adjacent to the tree line at the northern edge of the project area. Machine Block 2, measuring 182 m<sup>2</sup>, was placed 55 m south of the first block to expand the area investigated by Block B. Machine Block 3, totaling 192 m<sup>2</sup>, was placed between Machine Blocks 1 and 2 in an area where Bowen (1984) had found features. The total area excavated in the three machine excavated blocks was 486 m<sup>2</sup>.

Standard archeological recording techniques were used during field investigation. Black and white and color photographs were taken as needed to record excavation areas and more complex profiles. All cultural features were photographed, generally in both plan and profile. Elevations, soil descriptions, and distinguishing characteristics of all block units were recorded in the field. Both shovel tests and features were recorded on individual forms. Features were also mapped in both plan and profile.

Half of each feature was 0.64 cm (0.25 in) screened. With prehistoric features, the remainder was then screened through 0.325 cm (0.12 in) mesh for recovery of subsistence material. However, flotation samples were the primary method of subsistence data recovery. Soil samples and small pollen samples were taken from each cultural feature.



## Analyses

**Laboratory Processing and General Analysis.** Field records and artifacts were returned to SAS offices in Athens for analysis and interpretation. Prehistoric artifacts were placed into descriptive or typological categories. The definition and description of these categories are presented in the Material Remains chapter of this report. Lithic material was also sorted by raw material. Historic artifacts were identified by categories commonly accepted for the region. Artifacts were tabulated according to proveniences assigned in the field.

Soil samples recovered in the field were used for three purposes. Flotation samples from features and midden zones were processed in pure water to extract subsistence-related material. The light fraction was recovered with a 0.4 mm sieve and the heavy fraction was recovered with a 1.5 mm sieve. Both fractions from ten features and three midden samples were analyzed for archeobotanical content. Texture analysis was performed on two soil samples in order to classify the soils and determine the possible origin of the local soils. Fifty grams of soil screened in a 2 mm sieve (to obtain a suitable laboratory sample) was analyzed for percentage of sand, silt, and clay. Finally, small soil samples and pollen samples from each feature were not processed and will be curated.

**Archeobotanical Laboratory Analysis.** The charcoal samples recovered from flotation were screened through a graduated series of standard geological testing sieves with mesh sizes 2 mm, 1 mm, and 0.25 mm. The contents of the 2 mm sieve were sorted, weighed, and then identified using a variable power binocular microscope (7X to 30X). The sample composition is presented in Appendix A. The remainder of the charcoal in the 1 mm and 0.25 mm sieves was examined and only the seeds and fruits were removed and counted. The seeds and fruits were identified with the aid of the *Seed Identification Manual* (Martin and Barkley 1961). The information on species range and habitat was taken from Radford et al. (1968) and Gleason (1958). The wood charcoal fragments were identified to genus or species with the aid of the *Textbook of Wood Technology* (Panshin and de Zeeuw 1964). A maximum of 30 fragments was obtained from the 2 mm screen for identification.

**Faunal Analysis.** Only a small sample of faunal material was recovered. Bone was identified to genus and species when possible. The sample was counted, weighed, and examined for butchering marks and other modifications.

**Archival Research.** This was conducted through inspection of records and maps available at the University of Georgia Library map and manuscript files, Athens, the Richmond County Courthouse (Deed Records), Augusta, and the Georgia Department of Archives and History, Atlanta. Secondary sources included county and city histories, specifically Jones and Dutcher (1890), Chapman (1897), Jones (1982), and Cashin (1980, 1986).



## **Curation**

All artifacts, photographs, and field notes are curated at the Department of Anthropology, University of Georgia, Athens.



# RESULTS OF FIELD INVESTIGATIONS

## Defining Site Limits

The field investigation of 9Ri158 is actually the excavation of one portion of a larger site (i.e., the greater site area) arbitrarily defined by the boundaries of a proposed highway corridor and modern construction features (see Figure 6). The site boundaries today are entirely artificial. As defined by Bowen (1984), 9Ri158 is an island encircled by a canal, railroad, and borrow pit. Present site boundaries have little correlation with the boundaries of prehistoric or historic utilization. A better understanding of the original site size is critical to interpretation of site function. Therefore, it was necessary to determine if the project area was located in an advantageous physiographic location or in a less inviting portion of a broader and more homogeneous landform.

Inspection of exposed ground surface near the project area revealed a thin scatter of lithic material over most of Eisenhower Park, north of the site. Sparse lithic debris was also noted on exposed trails in the undeveloped lots south of the project area between the canal and the subdivision road (see Figure 1). Collectors also reported recovering artifacts in these areas in past years. Archeological documentation (Clafin 1931; Bowen 1984) and collector information is abundant for the greater site area east of the canal. Bowen (1984) defined one large and two smaller sites. Bowen's site boundaries, however, were partially determined by modern features, primarily the railroad line (see Figure 3). The collectors indicated that collections were made over most of the field (9Ri(DOT)25) and the water works parking lot.

The project area is clearly part of an extensive artifact scatter that can best be defined by landform. The scatter appears to correlate with a long, broad ridge that forms a 10 to 15 m high bluff above the Savannah River. The extent of this landform along the river could be determined by identifying tributary streams to the north and south. Unfortunately, these streams were diverted and old channels obscured by the construction of the Augusta Canal in 1845.

Modern aerial photographs and topographic maps were of little value in defining the original extent of this landform. Rather detailed early nineteenth century plats were helpful. Plat maps of the Milledge and Warren estates (Deed Books 3:30-31, AA:419-420, and QQ:389-390) indicate a continuous bluff line along the Savannah River between Rock Creek 1.2 km to the north and Warrens Spring Branch (Colemans Spring) 1 km to the south, a distance of 2.2 km (1.4 mi).

Probably the entire bluff edge was occupied during prehistoric times. Occupation may have ranged from transitory to long term settlement. Historic documentation shows that the area between the two tributaries was encompassed by large nineteenth



century plantations. Previous archeological investigation and historic documentation thus allow a comparison between the arbitrarily defined project area and the greater site area.

## Surface Collection

A systematic surface collection was not conducted during data recovery. Surface exposure was not extensive, being limited to areas along fence lines, roads, and pig wallows. Additionally, portions of the area were covered by truck loads of trash and fresh household garbage.

Small surface collections were made from a partially exposed animal pen at the northeast corner of the project area (Table 1) and the dirt road along the project's southern boundary (Table 2). These small collections were directed toward the recovery of diagnostic artifacts, since quantified debris counts were available from the shovel tests.

**Table 1. Northeastern Surface Collection.**

Projectile point/knife fragments	
Paleoindian lanceolate, quartz	1
Kirk Corner Notched, chert	1
Kirk Corner Notched, quartz	1
Middle Archaic stemmed, quartz	2
Morrow Mountain, quartz	1
Ovate biface, quartz	2
Flake tool, quartz (graver)	1
Utilized flakes	
chert	1
quartz	2
Groundstone	
Mano	1
Hammerstone fragment	1
Perforated soapstone fragment	1
Ground soapstone fragment	1
Unmodified soapstone	1
<b>Total</b>	<b>17</b>



**Table 2. Southern Surface Collection.**

Lithic debris, metavolcanic	2
Preform, quartz	2
Projectile point/knives	
Dalton, metavolcanic	1
Late Archaic stemmed, metavolcanic	1
Projectile point/knife fragments	
chert	2
quartz	3
Ovate biface, quartz	1
Thick biface, quartz	1
Utilized flakes	
chert	1
metavolcanic	5
<b>Prehistoric total</b>	<b>19</b>
Blue edged whiteware	1
Blue transfer printed whiteware	1
Plain whiteware	2
Green bottle glass	1
<b>Historic total</b>	<b>5</b>

The small amount of collected material indicates the lack of diagnostics remaining on the surface. However, the artifacts do reflect the variety of components.

### Shovel Tests

The western line of tests followed the ridge crest and the eastern line followed a gentle slope (see Figure 6). Artifact tabulations from the 28 shovel tests and 49 screened trench samples are presented in Appendix B. These 77 samples are equivalent to an area of 19.25 m<sup>2</sup>, thus constituting a 0.1% sample of the investigated 18,700 m<sup>2</sup> project area. The absence of sterile shovel tests reflects the broad dispersal of artifacts over the project area. Cultural material in shovel tests was recovered from the surface to depths ranging from 7 to 24 cm. Average plowzone depth was 15 cm.

The generally small shovel test collections (Table 3) are of limited diagnostic value, but they do indicate artifact density and raw material composition. The small tests produced primarily quartz lithic debris. Historic material was also widespread. Discounting unmodified stone, the 77 tests produced 2908 artifacts, of which 2378 were prehistoric and 530 (18%) historic. Diagnostic artifacts identified components ranging from Transitional Paleoindian Dalton through the present.



**Table 3. Shovel Test and Trench Sample Artifact Summary.**

	Total Count for All Tests	Range in Artifact Counts*	Average Artifact per Test	Number of Positive Test
<b>Debitage</b>				
quartz	1515	0-70	19.7	76
chert	194	0-7	2.5	62
metavolcanic	126	0-14	1.6	52
<b>Total</b>	<b>1835</b>	<b>0-74</b>	<b>23.8</b>	<b>76</b>
<b>Cores and Preforms</b>				
quartz	48	0-5	0.6	32
chert	-	-	-	-
metavolcanic	6	0-1	0.1	6
<b>Total</b>	<b>54</b>	<b>0-5</b>	<b>0.7</b>	<b>34</b>
<b>PP/K and Biface Fragments</b>				
quartz	10	0-2	0.1	9
chert	10	0-2	0.1	9
metavolcanic	4	0-1	0.1	4
<b>Total</b>	<b>24</b>	<b>0-4</b>	<b>0.3</b>	<b>19</b>
<b>Flake Tools</b>				
quartz	65	0-5	0.8	33
chert	13	0-2	0.1	11
metavolcanic	5	0-3	0.1	3
<b>Total</b>	<b>83</b>	<b>0-9</b>	<b>1.1</b>	<b>39</b>
Ground stone	26	0-6	0.3	19
Fire cracked rock	318	0-21	4.1	45
Ceramics	38	0-4	0.5	23
<b>All Prehistoric</b>	<b>2378</b>	<b>0-83</b>	<b>30.9</b>	<b>76</b>
<b>All Historic</b>	<b>530</b>	<b>0-104</b>	<b>6.8</b>	<b>59</b>
<b>ALL ARTIFACTS</b>	<b>2908</b>	<b>3-177</b>	<b>37.7</b>	<b>77</b>

\*range expressed in minimum to maximum count per test



The data demonstrate the extensiveness and overall homogeneity of cultural material within the plowzone deposit of the project area. The extensive distribution of both prehistoric and historic artifacts is reflected in the number of positive shovel tests and the average number of artifacts per shovel test. Variation of overall site density is reflected in the great range of artifacts found in the 77 tests (ranging from 3 to 177 artifacts).

The project area is primarily a prehistoric site (82% of all artifacts) dominated by chipped stone (83.9% of all prehistoric artifacts). Quartz, a locally available lithic raw material, shows the highest diversity of debris and tool classes, while the non-local cherts and metavolcanics occurred most often as curated tools.

The shovel test data were used to prepare generalized distribution maps of artifact density for total prehistoric and total historic artifacts (Figure 12). Two twentieth century structures, a house and a barn, dominate both the historic and prehistoric patterns with the distribution of the prehistoric material being a nearly negative image of the historic pattern. This pattern may reflect historic period disturbance to the aboriginal site, essentially displacing prehistoric material in the construction area. Figure 13 presents shovel test data for aboriginal ceramics and early to mid-nineteenth century historic ceramics. Again, these distribution patterns may reflect erosion of aboriginal deposits resulting from construction of the two structures.

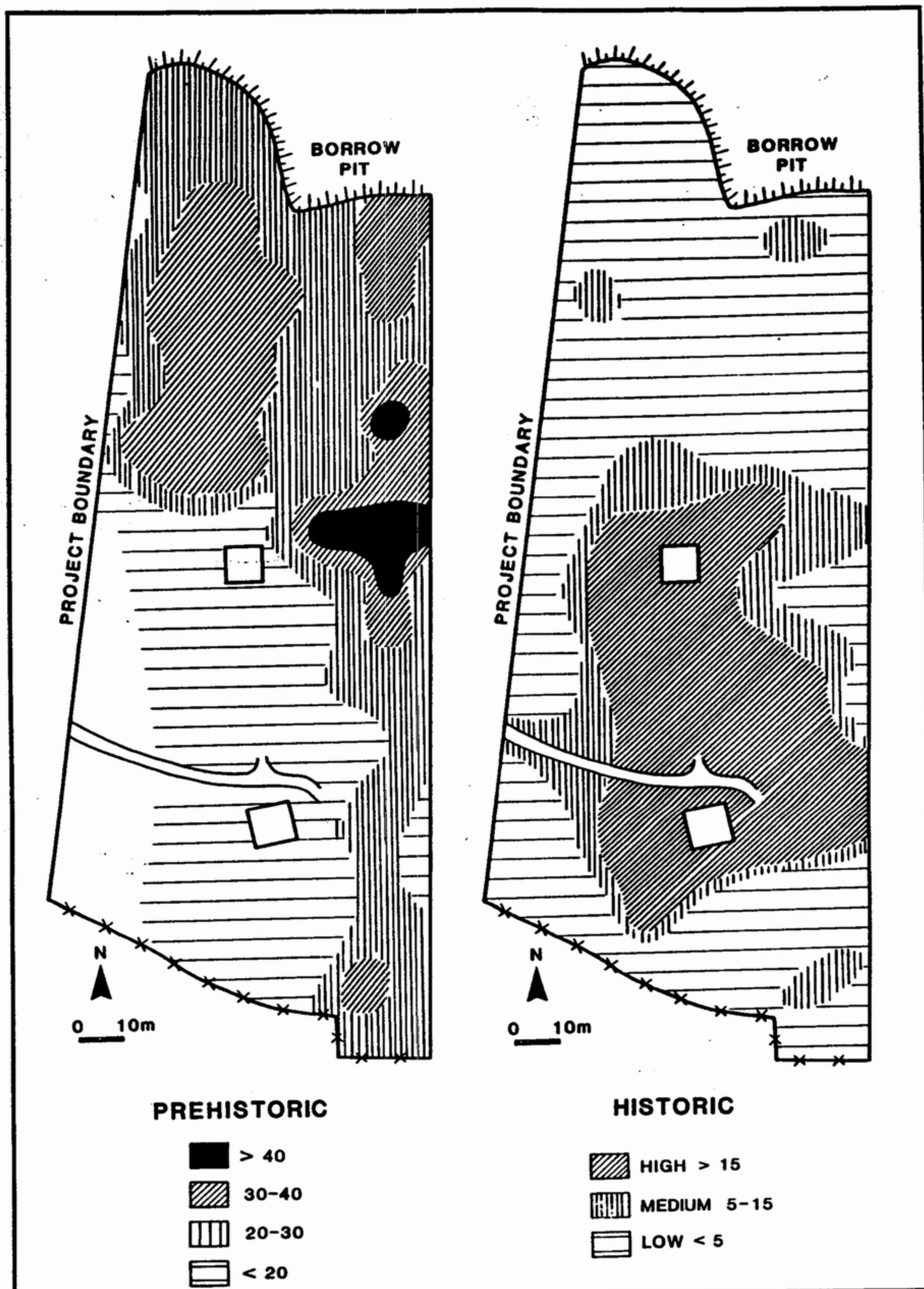
Historic artifacts are concentrated around the early twentieth century house and barn (see Figure 12). Twentieth century artifacts are concentrated around the structures while early nineteenth century ceramics (see Figure 13) are distributed beyond the limits of twentieth century construction. The distribution pattern of pearlware and early decorated whitewares, coupled with the distribution of architectural debris (not illustrated), show that several structures were probably present in the project area during the early to mid-nineteenth century.

## Test Trenches

Backhoe trenching was the most effective method of site testing. Table 4 provides summary data for the 20 trenches excavated. Trenching determined that the ridge crest was extensively disturbed by plowing. Given the long history of agricultural use and its relative elevation, a great deal of soil loss from that area could be expected. Subsoil intrusions were identified, but these consisted of root stains and historic posts. The eastern edge of the site contained a partially preserved, sub-plowzone, Archaic midden deposit. This deposit extended through eight of the twelve eastern trenches. Although many of the intrusions in this area were tree roots, prehistoric features were found in Trench 14.

During the excavation of the trenches, a grab sample of artifacts, biased toward large and diagnostic pieces, was gathered. These collections (Table 5) were valuable for increasing the count of diagnostic artifacts.





**Figure 12. Density Maps Prepared from Shovel Test Data.**



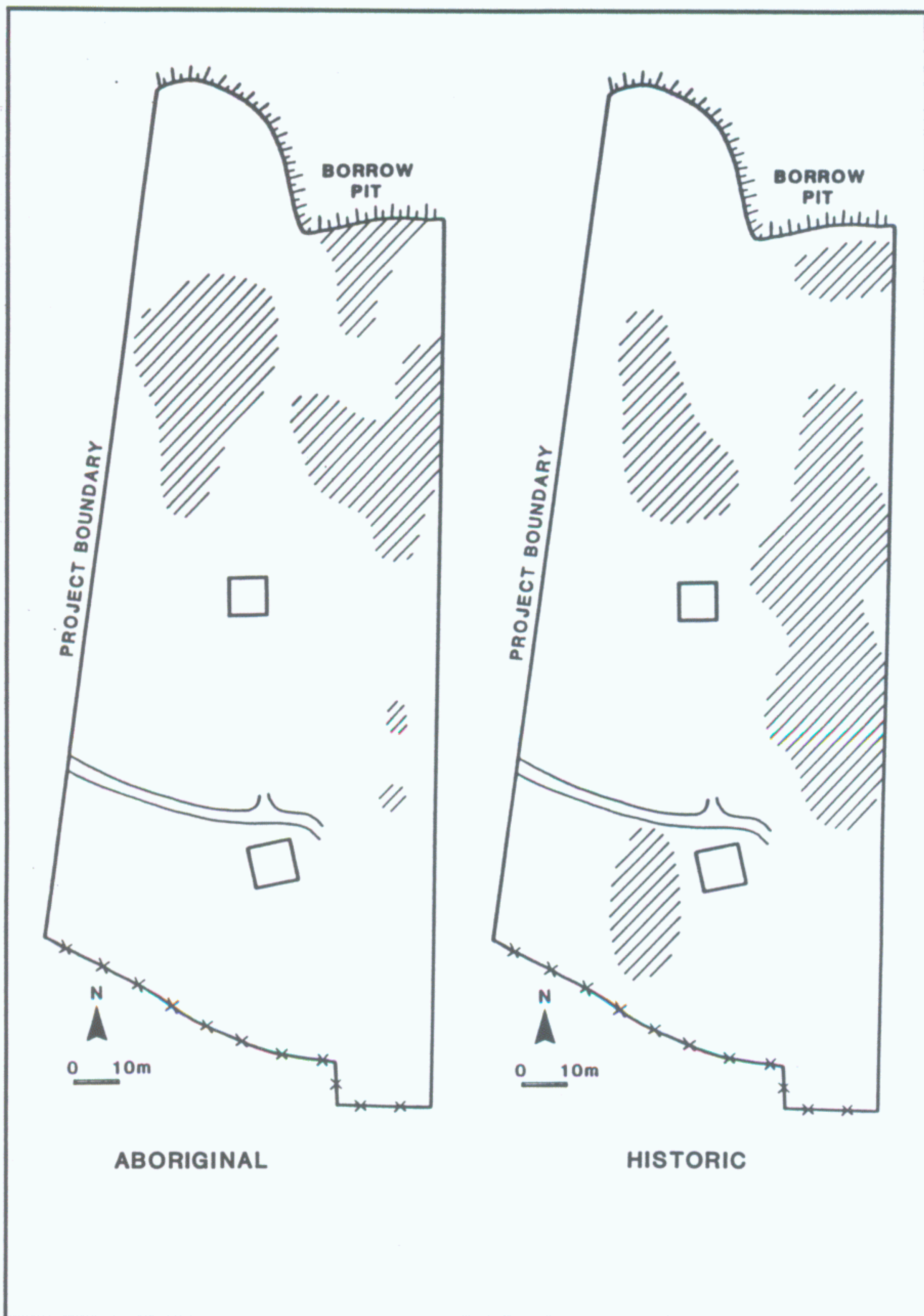


Figure 13. Distribution of Aboriginal Ceramics (*left*) and Early Nineteenth Century Historic Ceramics (*right*) Prepared from Shovel Test Data.



**Table 4. Trench Data.**

Trench Number	Trench Length (m)	Maximum Trench Depth (cm)	Plowzone Depth (cm)	Midden Depth (cm)	Cultural Features	Non-Cultural Features
<b>Crest</b>						
1	25	25	18	absent	1	-
2	20	20	17	absent	-	3
3	11	20	16	absent	-	-
10	30	25	15	absent	-	3
15	37	25	12	absent	2	4
18	10	25	15	absent	-	-
19	10	22	18	absent	-	-
20	10	23	18	absent	-	-
<b>East Slope</b>						
4	17	45	18	absent	-	1
5	20	30	15	15-22	-	2
6	24	40	15	15-33	-	2
7	22	30	16	16-20	-	-
8	13	50	18	absent	-	2
9	11	25	15	absent	-	1
11	17	40	18	18-22	-	3
12	17	30	18	18-23	-	-
13	10	25	18	absent	-	1
14	32	80	18	18-24	2	4
16	13	40	20	20-28	-	-
17	12	65	15	15-20	-	1

## Hand-Excavated Block Excavations

As previously discussed, block excavations included five hand-excavated units, designated Blocks A-E, and three machine-stripped areas, designated Machine Blocks 1-3. Hand excavation allowed finer control in identifying features, especially in determining point of origin. Hand excavation also allowed the investigation of stratigraphy and of artifact patterning. Machine stripping, on the other hand, allowed the investigation of site structure as revealed by feature patterning. The five hand-excavated units were placed along the eastern edge of the project area in order to investigate the remnant midden deposit. Artifact summaries and plan maps are presented in the test. Complete artifact tabulations are presented in Appendix C.

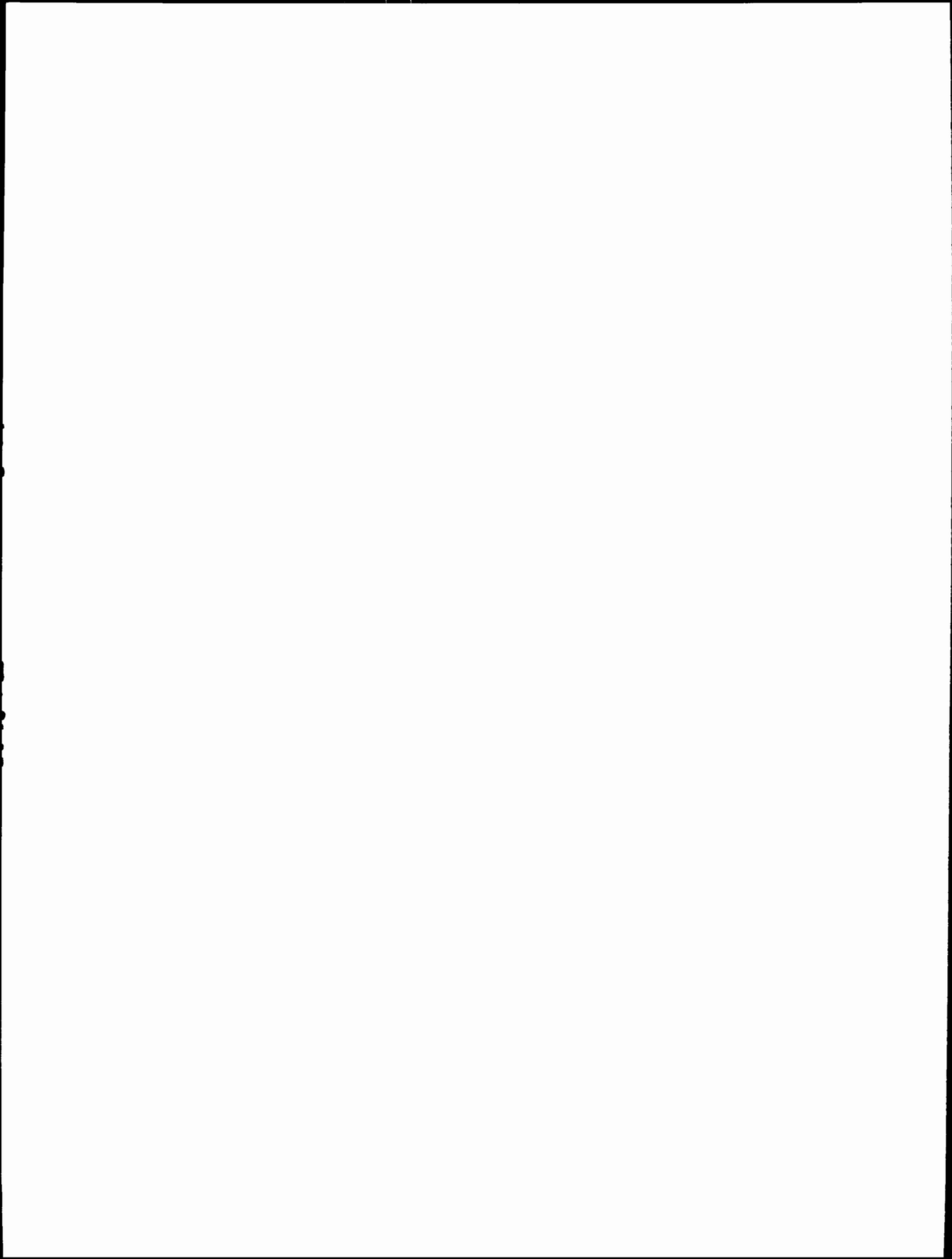


Table 5. Trench Artifact Summary.

Trench No.																				TO-
1	2	3*	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18*19*20	TAL		
Kirk C. N. PP/K	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Benton PP/K	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2	
Morrow Mtn. PP/K	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
M. Archaic Stem PP/K	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	7	
L. Archaic Stem PP/K	-	-	-	-	-	-	-	1	1	1	-	2	1	-	-	-	-	-	14	
PP/K fragment	-	2	-	1	2	-	-	2	1	1	3	-	-	1	-	-	1	-	4	
Ovate biface	-	1	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	3	
Bifacial chopper	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Adze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Axe	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	
Unifacial scraper	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	
Pieces esquillees	-	-	-	-	-	-	-	-	1	3	-	-	1	-	-	-	-	-	2	
Graver	-	-	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	-	5	
Perforator	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
Burin	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	
Spokeshave	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Utilized flake	2	4	-	3	2	-	-	1	14	2	1	1	7	-	1	2	-	-	41	
Preform	4	4	-	2	8	4	-	-	17	4	6	4	6	-	7	3	1	-	71	
Lithic debris	-	9	-	2	-	1	-	-	-	-	-	-	2	-	-	-	-	-	14	
Hammerstone	-	-	-	-	-	-	1	-	-	1	-	-	-	1	1	-	-	-	4	
Soapstone	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	2	
Pitted cobble	-	2	-	-	-	2	1	-	-	2	-	-	-	-	-	-	-	-	7	
Celt	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	
Aboriginal ceramic	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	
TOTAL PREHISTORIC	9	23	-	3	12	15	8	2	4	38	15	10	8	20	5	12	5	3	192	
Pearlware, mocha	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	
Whiteware, plain	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	2	
Whiteware, trans. pr.	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	-	3	
Glass, bottle	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	
TOTAL HISTORIC	-	-	-	-	-	1	1	-	4	-	-	-	-	-	-	-	-	1	7	
*not collected																				

\*not collected







Interpretations made from the Archaic midden data are restricted. First, because of extreme dryness at the time of excavation, the midden zone was indistinguishable in color and texture from the overlying plowzone. The midden originates at the base of the plowzone and contamination from deeper plow cuts, tree roots, rodent burrows, and indistinct cultural intrusions are likely. The presence of prehistoric ceramic and historic period artifacts, of course, indicates contamination.

Secondly, diagnostics, features, or subsistence data are not abundant in the preserved cultural deposit. The extant deposit is the basal portion of a once thicker cultural deposit that obviously existed on the site prior to plowing. Hence, the extant deposit is essentially the bottom of the midden. The cultural zone may, in some instances, be equated with a Paleoindian or Early Archaic occupation. However, in most blocks, the deposit is viewed as a mixed but predominantly Late Archaic zone.

Figure 15 illustrates the extent of the preserved midden deposit as shown in the northern profile of Trench 14. Trench 14 consisted of an 18 m segment within the boundaries of project area and a 14 m extension outside the boundary line. The trench extension verified the existence of the midden zone as a continuous deposit extending to the canal's edge. The midden zone in the extended area, beyond the gentle slope of the project area, maintained a consistent depth of deposit and appeared to maintain an artifact density comparable to that within the project area (as indicated by screened trench samples).

It should be noted that the midden portrayed in the Trench 14 profile varies only slightly in color and texture from the underlying 'subsoil.' Our texture analysis identified the midden as a clay loam composed of 30% sand, 30.8% silt, and 39.2% clay. The underlying zone more clearly fit the description of an alluvial soil, being a sandy clay loam. This non-cultural layer, with its higher sand content, was composed of 45% sand, 21.8% silt, and 33.2% clay.

Two Early Archaic bifaces from the midden zone of Trench 5 represented the only diagnostic material found in the zone during test trenching. One was a heavily patinated chert Kirk Corner Notched point and the other a quartz point with steeply beveled blade edges and reworked haft (Figure 14). The additional discovery of a hearth in adjacent Trench 14 indi-

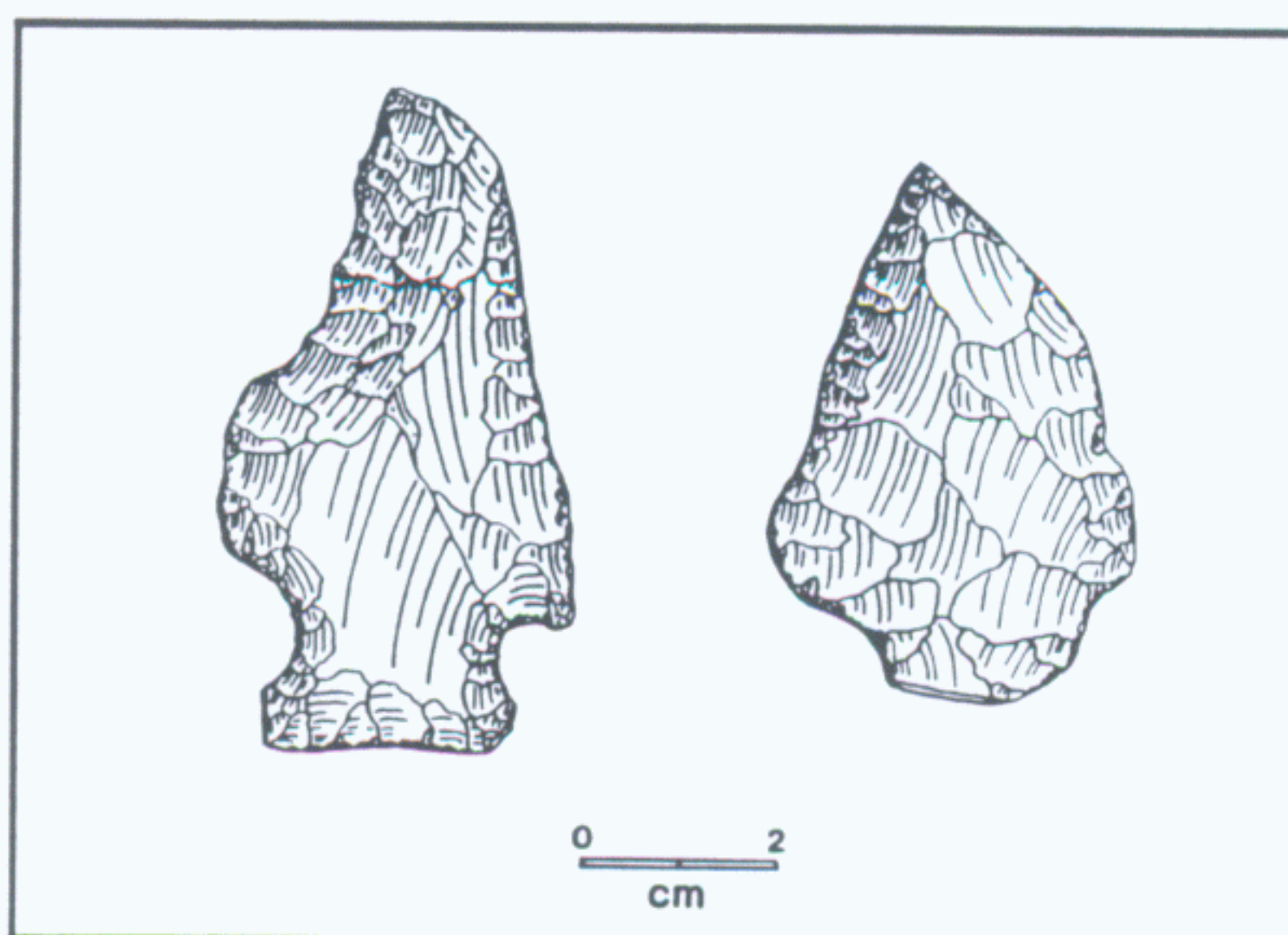


Figure 14. Trench 5 Midden Zone Early Archaic Bifaces.



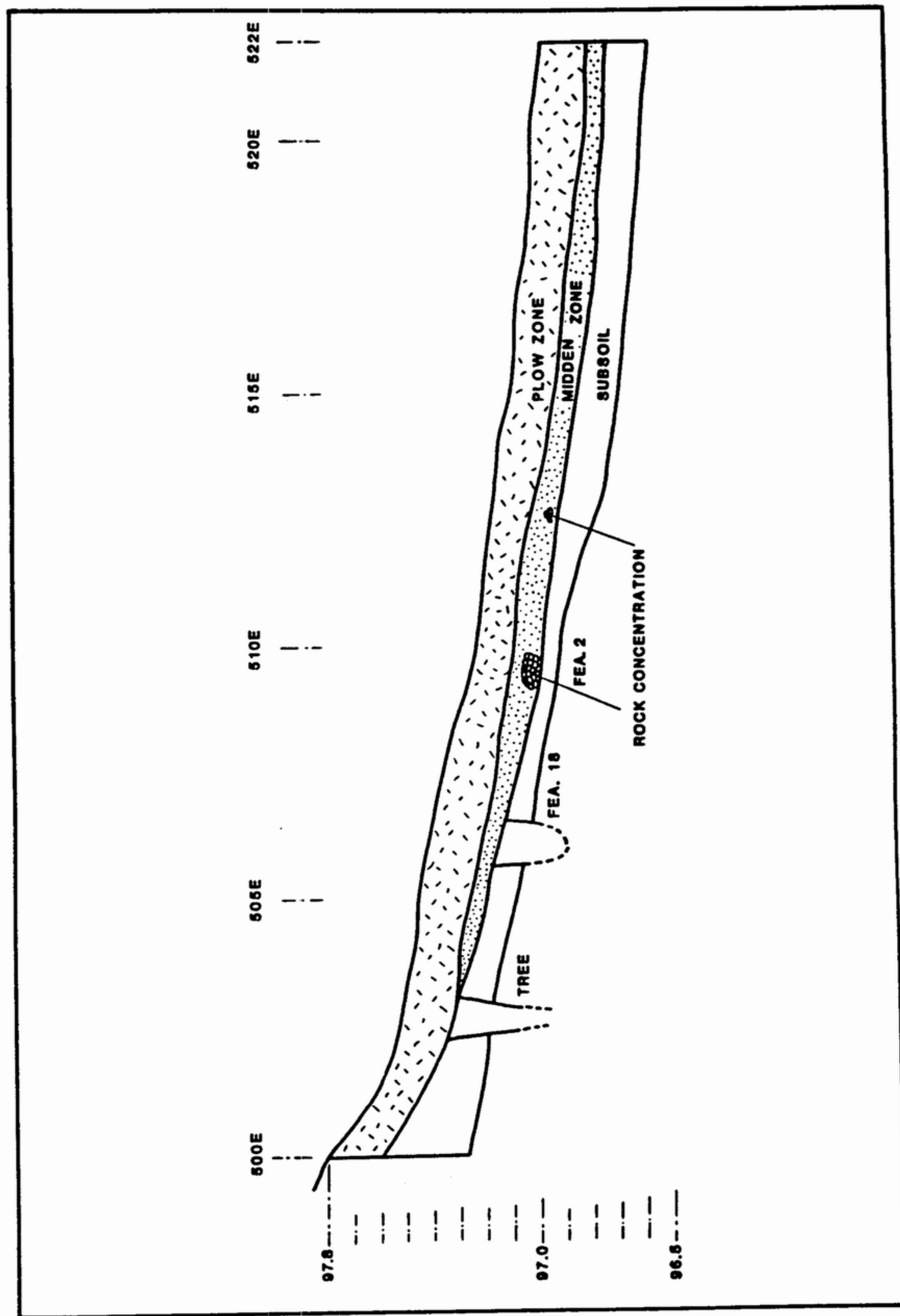


Figure 15. North Profile of Backhoe Trench 14 Illustrating the Extent of the Midden Zone.



cated that a significant Early Archaic activity area might be present. However, further testing (Blocks A and C) showed no evidence of intensive Early Archaic occupation. The midden zone was found to contain predominantly Late Archaic material.

**Block A.** This unit, placed in the most productive portion of the site as indicated by trenching, was excavated in one midden zone. The block was laid out immediately adjacent to the Trench 14 hearth and southeast of the part of Trench 5 that had produced the two Early Archaic points (see Figure 6). Block A was originally laid out as a 3 by 4 m unit. Later, the unit was expanded to 21 m<sup>2</sup> in order to completely encompass the hearth.

The midden zone within the block varied from 10 to 13 cm in thickness. One feature (Feature 5) was found near the top of the zone. Feature 5, a stone hearth, was similar to the hearth found in Trench 14. Both were found at the same depth and both had fill of slate-like metamorphic stone and a few discarded chipped and groundstone metamorphic tools. Associated tools indicate that these two hearths are Late Archaic. These tools closely resemble the more diagnostic Late Archaic features on the site and the tools excavated from Late Archaic sites in the area (Claflin 1931; Elliott and Doyon 1981).

A single biface similar in style to Morrow Mountain was one of three potentially diagnostic points recovered from the midden of Block A. This biface may indicate a Middle Archaic component, but it may also be an ovate form associated with an Early Archaic component. One additional biface, a burinated ovate, made from quartz, is similar to the Morrow Mountain point and may be associated.

Two probable Late Archaic points (Figure 16) were recovered from the unit. These two quartz points have expanding stems with similarities to both late Middle Archaic Benton and Late Archaic/Early Woodland Flint Creek point styles (Cambron and

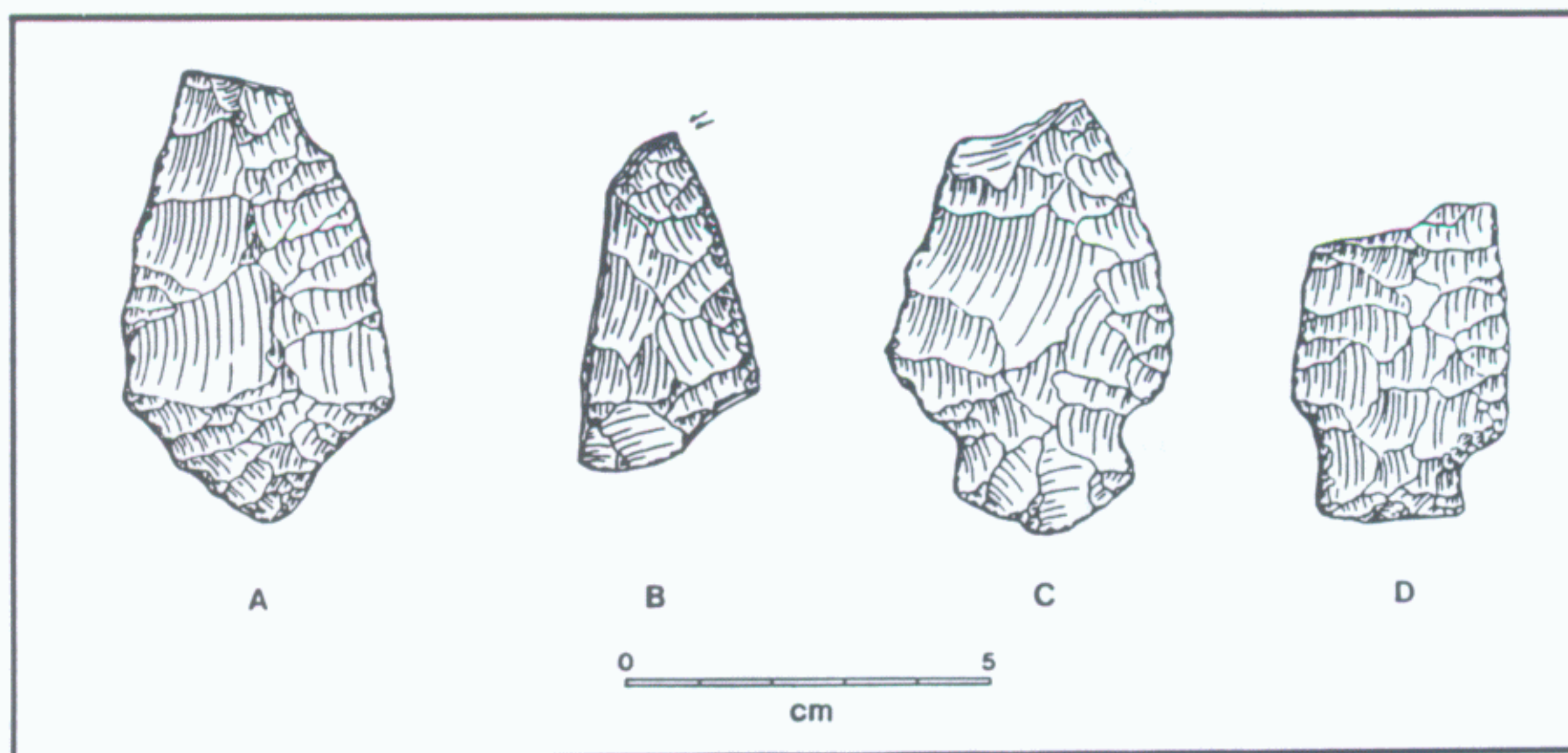


Figure 16. Block A Early/Middle Archaic (A-B) and Late Archaic (C-D) Bifaces.



Hulse 1975). Soapstone, a material strongly associated with the Late Archaic, was thinly scattered near the center of the unit. One soapstone vessel fragment was found, but most were small waste fragments. This soapstone may be associated with the midden at the level of the hearths, or it may have filtered downward from a higher level. If the hearths were originally in shallow basins, much of the material associated with the Late Archaic occupation level could now be dispersed in the plowzone.

In general, the tools identify a Late Archaic component with minor evidence of an Early or Middle Archaic component. The midden zone in Block A produced 39 chipped stone tools and 968 pieces of debris, producing a tool to debris ratio of 1:25. Of the chipped stone tools, 35.8% were bifaces. The remaining tools were predominantly expedient, small cutting and scraping tools (Table 6).

Artifact patterning within the Block A midden is evident when the distribution and density of chipped stone debris is contrasted with the fire cracked rock (Figure 17). The highest density of debris lies immediately adjacent to the stone hearths. Late Archaic tools and soapstone debris are also concentrated near the hearths (Figure 18). Figure 18 also illustrates the overlap of the Late Archaic with the minor Early/Middle Archaic deposits.

Coastal Plain chert, at 24.6%, accounts for a high proportion of lithic material, when contrasted to 10.9% for the site as a whole. A portion of the Block A chert (approximately 20%) is heavily patinated and may be part of an Early Archaic assemblage. Significantly, 82% of the chert lithics are bifacial thinning flakes, evidence of biface resharpening. Quartz and metavolcanic material show broader variation in debris categories, with bifacial thinning flakes accounting for only 38% of the quartz and 26% of the metavolcanics. Block A produced a large number of cores ( $n=8$ ) but, unlike much of the site, no preforms. Five of the cores exhibit obvious modification and are classified as core tools. Core tools seem to have functioned as expedient heavy cutting and scraping instruments. Except for the tools found in the hearths and the scattering of soapstone, the ground stone tool category is represented only by hammerstones.

Differential use of the site over time is suggested by the Block A data. The Middle Archaic or Early/Middle Archaic occupation was limited to tasks that could be performed with bifaces and a few expedient cutting and scraping tools. The material left behind could have accumulated during single or repeated, but brief, visits to the site by small groups of people.

Direct evidence of Late Archaic occupation suggests varied and intensive site utilization. Assigned to the Late Archaic component are the two hearths containing ground stone, two projectile points, a soapstone sherd, soapstone debris, and large chipped stone chopping tools.



**Table 6. Tools Recovered from Block A.****Plowzone Grab Sample**

Projectile point/knives	
Late Archaic stemmed, chert	1
Late Archaic stemmed, quartz	1
Ovate, quartz	1
Flake tools	
utilized flake, chert	1
utilized flake, quartz	1
Preforms	
quartz	2
metavolcanic	1
<b>Total</b>	<b>8</b>

**Midden Zone Collection**

Projectile point/knives	
Late Archaic expanded stemmed, quartz	2
Morrow Mountain, quartz	1
Projectile point/knife fragments, quartz*	4
Projectile point/knife fragments, chert*	3
Bifaces	
thick bifaces, metavolcanic	3
chopper/hoe, metavolcanic	1
stemmed scraper, quartz	1
Unifaces	
sidescraper, quartz	1
Core tools, quartz**	5
Flake tools	
perforators, quartz	2
graver, quartz	1
utilized flakes, quartz	13
utilized flakes, chert	2
Groundstone	
thick soapstone sherd	1
soapstone fragments	10
hammerstones	2
<b>Total</b>	<b>52</b>

*\*one quartz biface is burinated and one chert biface is reworked as an endscraper; \*\*core tools include two with scraper edges and three with retouched cutting edges.*



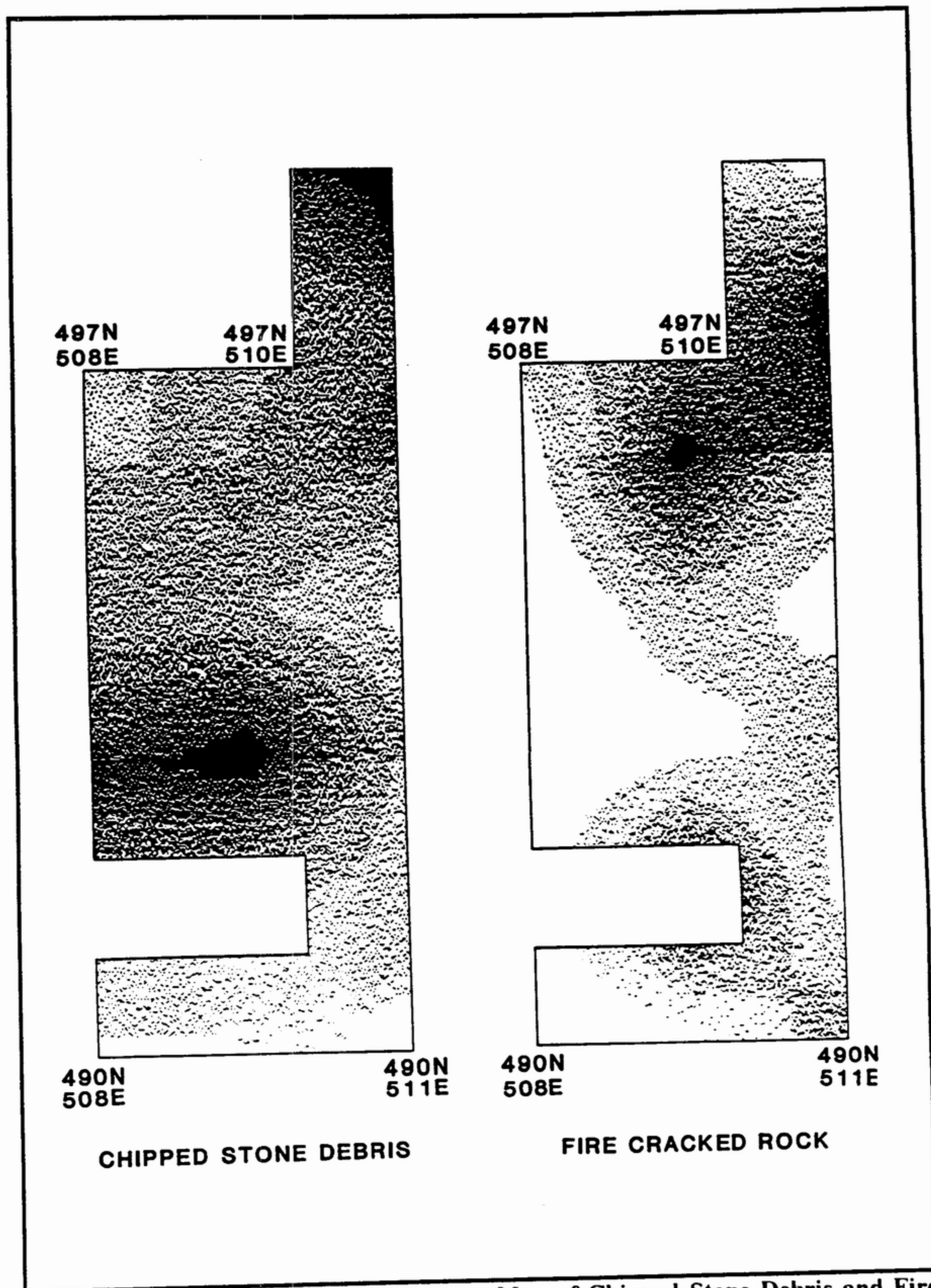


Figure 17. Block A Midden Zone Density Map of Chipped Stone Debris and Fire Cracked Rock.







Subsistence evidence is extremely sparse in Block A. Small fragments of wood charcoal were found in the midden flotation sample. A few hickory nut fragments were recovered from Feature 2, a Late Archaic hearth (see Appendix A), but neither seeds nor bone were found in the midden. The lack of bone and charcoal may be due to preservation on the site.

**Block B.** This unit was placed adjacent to Trench 6 (see Figure 6). The midden contents of this trench were conspicuous because of the high number of cores and preforms recovered (Table 7). Block B, covering 12 m<sup>2</sup>, contained the thickest midden deposit and was excavated in two levels. Of the two levels, the upper level, averaging 12 cm in thickness, was slightly darker, while the second level, averaging 6 cm in thickness, was more mottled. The levels also differed in the degree of post-Archaic contamination. No aboriginal ceramics or historic artifacts were recovered from the second level.

Block B produced no features and relatively few diagnostics. Tool to debris ratios varied between the two levels. The first level produced a ratio of 1:25; Level 2 produced a ratio of 1:11. Quartz predominated in both levels. The percentage of chert was approximately half that of Block A at 10.3% in Level 1 and 8% in Level 2 (see Appendix C). The percentage of chert bifacial thinning flakes remained high: 85% in Level 1 and 96% in Level 2.

Block B produced no features and relatively few diagnostics. Tool to debris ratios varied between the two levels. The first level produced a ratio of 1:25; Level 2 produced a ratio of 1:11. Quartz predominated in both levels. The percentage of chert was approximately half that of Block A at 10.3% in Level 1 and 8% in Level 2 (see Appendix C). The percentage of chert bifacial thinning flakes remained high: 85% in Level 1 and 96% in Level 2.

Diagnostics from Block B were rare. Level 1 contained four diagnostic Late Archaic/Early Woodland point fragments, two made from chert and two made from quartz. The points (Figure 19) are similar to the recognized types Gary and Adena. No complete diagnostic point was found in Level 2. One stem fragment is narrow and rounded and appears similar to the points found

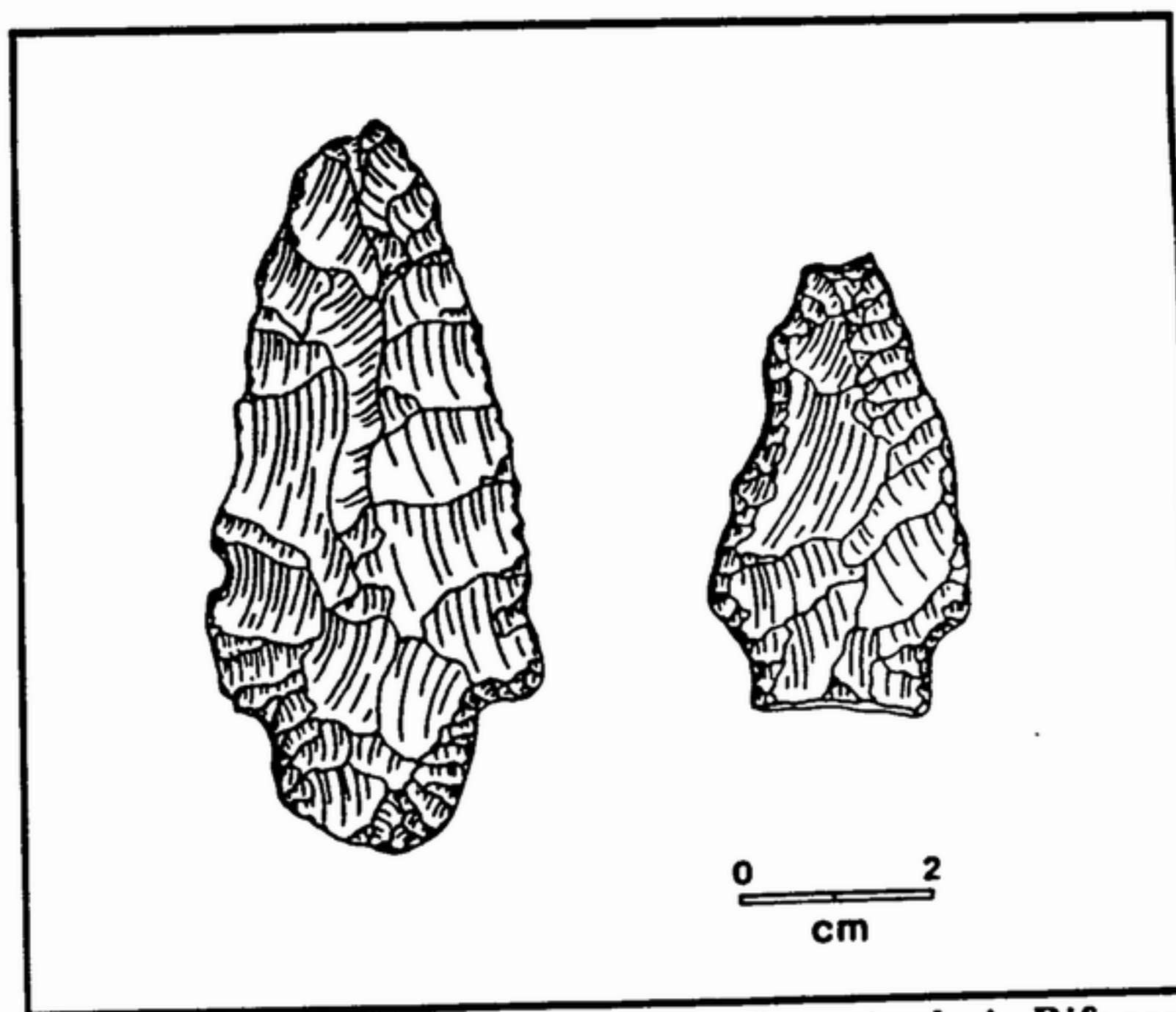


Figure 19. Block B Midden Zone Late Archaic Bifaces.



**Table 7. Tools Recovered from Block B.****Level 1**

Preforms, quartz	15
Projectile Point/Knives	
Gary/Adena, chert	2
Gary/Adena, quartz	1
Projectile point/knife fragments, quartz*	4
Projectile point/knife fragments, chert	2
Bifaces	
thick bifaces, quartz	2
thick bifaces, metavolcanic**	1
Flake tools	
perforator, quartz	1
notched tool, quartz	1
utilized flakes, quartz	21
utilized flakes, chert	3
Core tools, quartz***	2
Groundstone	
soapstone pipe fragment	1
soapstone fragments	2
diabase mano	1
hammerstone	1
ochre	5
<b>Total</b>	<b>65</b>

**Level 2**

Preforms, quartz	3
Projectile point/knives	
fragments, quartz	3
fragments, chert	1
Flake tools	
unifacial scraper, quartz	1
backed flake, quartz	1
graver, quartz	2
utilized flakes, quartz	11
utilized flakes, chert	3
Core tools, quartz***	2
<b>Total</b>	<b>25</b>

\*includes one Late Archaic PP/K stem fragment; \*\*celt-like; \*\*\*core tools are all scrapers.



in the upper level. Soapstone was present in Level 1 but not in Level 2. Level 2 was probably a sparse Early to Middle Archaic occupation zone. Both Kirk Corner Notched and Morrow Mountain points were found during shovel scraping in the adjacent midden of Machine Block 2. The low percentage of chert in Level 2 (8%) suggests that the level may be more strongly associated with the Middle Archaic than the Early Archaic.

As expected, evidence of quartz biface production was abundant, especially in Level 1. Fifteen preforms, four cores, and four thick bifaces were recovered from Level 1, representing 2% of the total lithics. Three preforms and six cores were recovered from Level 2, representing 2.6% of the total lithics from that level. Manufacturing debris forms a substantial proportion of the debitage count, while the proportion of bifacial thinning flakes is substantially lower than in Block A.

While biface manufacturing is abundant, additional activities are suggested by tool variety (see Table 7 and Figure 20). Five groundstone fragments were found in Level 1, suggesting plant processing, although the hammerstone could have been used for tool production. Level 1 also contained a fragment of a soapstone pipe, several pieces of pigment (ochre), a small metavolcanic celt-like tool, two mano fragments, soapstone debris, and expedient flake tools.

Level 2 contained biface fragments and expedient flake tools, both of which are evidence of biface manufacturing. The three categories of flake tools (unifacial endscraper, backed flake, and graver) in Level 2 are strongly associated with early tool assemblages. Like the midden deposit in Block A, the lower portion of the midden may represent a sparse use of the area by its first inhabitants.

Flotation samples contained wood charcoal and nut fragments from Level 1. Small numbers of hickory nuts and acorns were recovered that may be associated with the Late Archaic/Early Woodland occupation. Charcoal was lacking in the sample from Level 2.

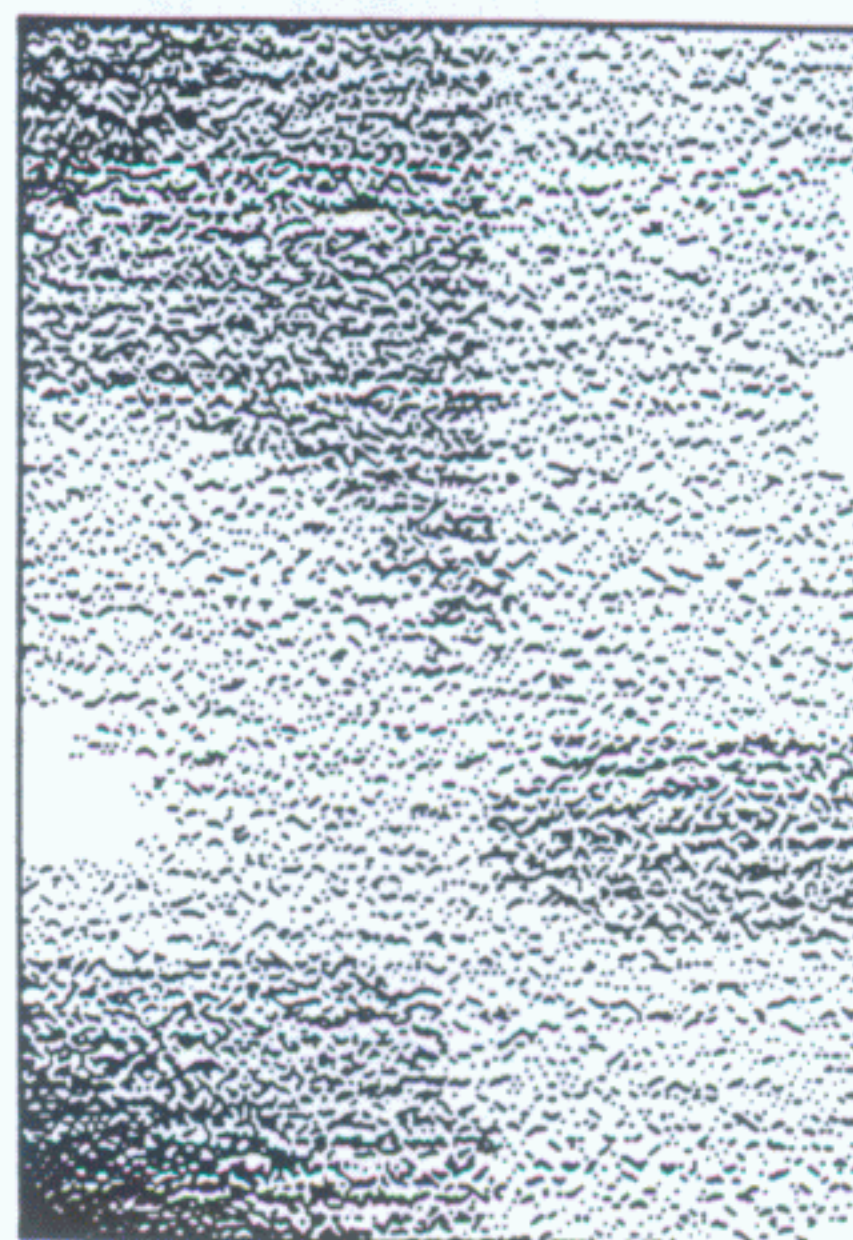
Levels 1 and 2 have been combined to examine artifact patterning with the midden zone of Block B. Twelve square meters is too small an area for more than general observations, but the Block B midden does exhibit variation in artifact density. Preforms are concentrated in the northwest two-thirds of the block (see Figure 20). Bifaces and expedient tools, however, are generally distributed across the unit. The lack of obvious patterning in Block B may reflect more intensive or repeated use of this portion of the site.

**Block C.** This block was placed adjacent to Trench 5 and 4 m north of Block A. Hopefully, the unit would encounter a portion of the Early Archaic deposit found in Trench 5. Block C contained an excavated area of 9 m<sup>2</sup> and a midden 8 cm thick. No features were encountered. The only diagnostic point was a fragment of an Early Archaic Kirk Corner Notched point. The point was a snapped basal fragment exhibiting steep post-breakage retouch. This retouch suggests that the point was modified for use





CHIPPED STONE DEBRIS



FIRE CRACKED ROCK

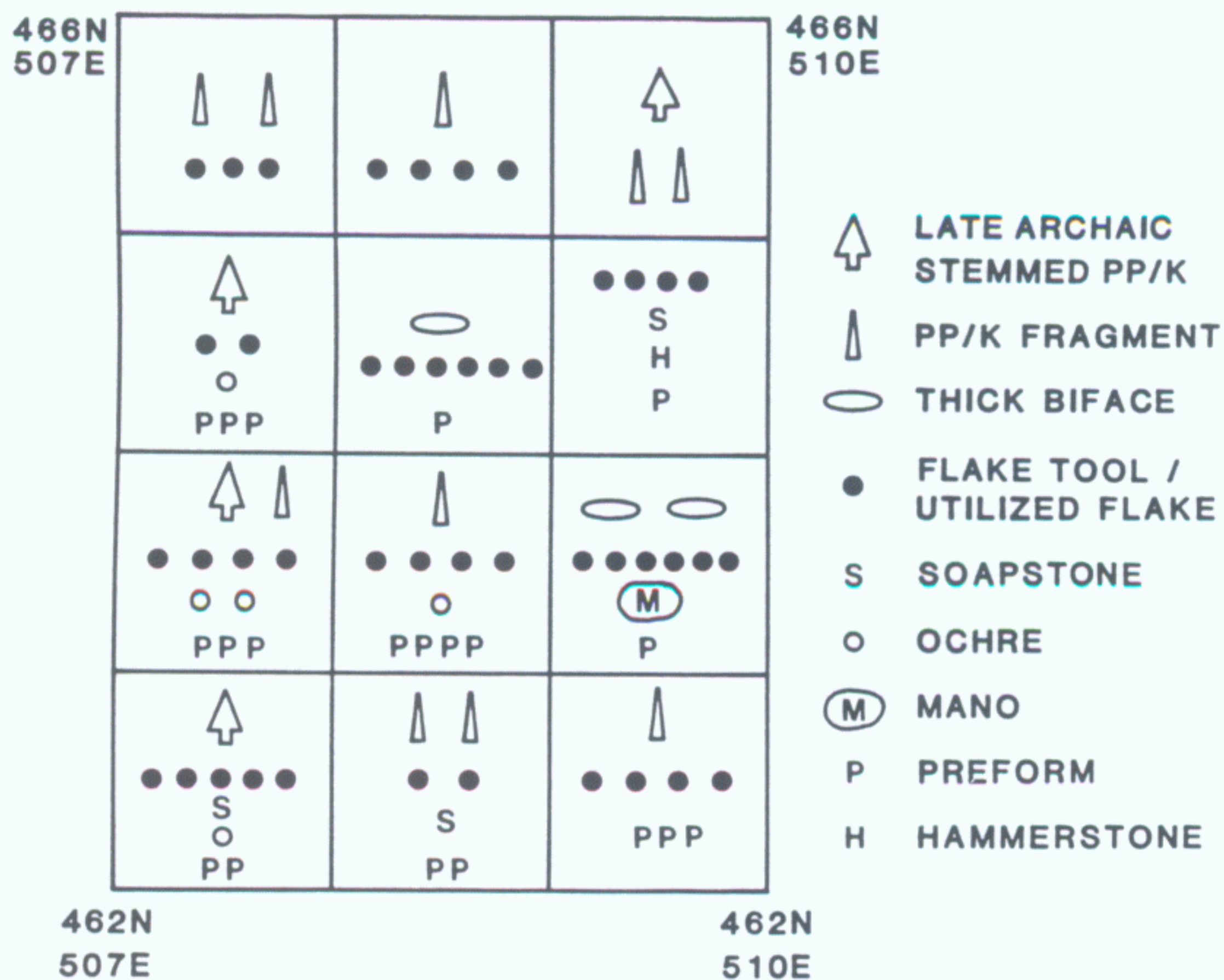


Figure 20. Block B Midden Zone Tool Distribution.



as a scraping tool. The same square produced a spokeshave-like scraper and a heavily battered wedge or *piece esquillee* (Figure 21). These few Early Archaic artifacts may accurately reflect the low intensity of site use during this period.

The tool to debris ratio for Block C, at 1:34, was very similar to Block A. Chert accounted for a substantially lower percentage (11.3%) than Block A and was essentially the same as Block B.

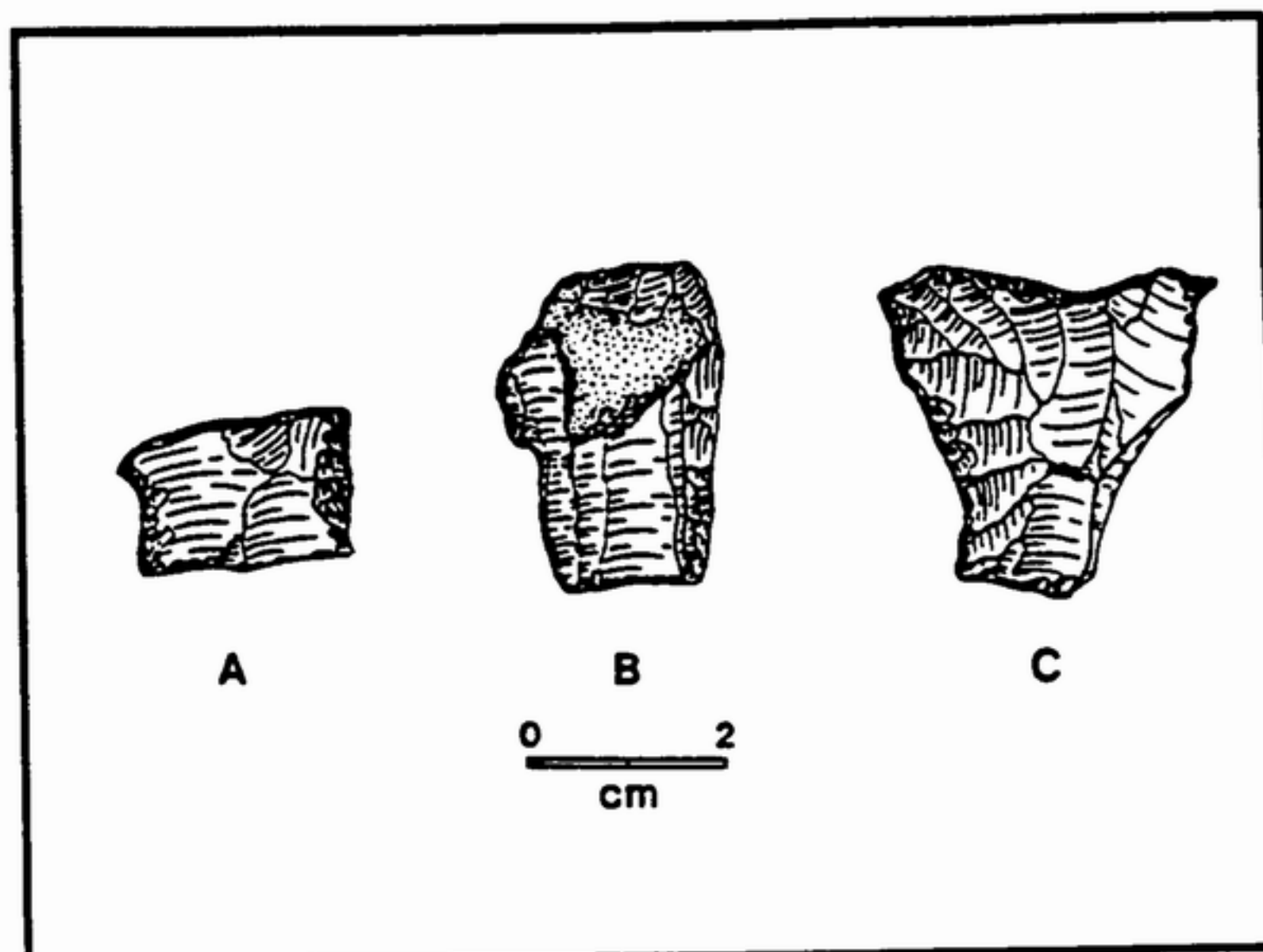


Figure 21. Block C Midden Zone Early Archaic Artifacts. A. Kirk Corner Notched; B. Wedge; C. Scraper (hafted spokeshave).

The unit contained no ground stone tools; only two small pieces of unworked soapstone debris were recovered. Tool counts and tool diversity (Table 8) were low. Biface production is evident in debris categories and the recovery of 7 preform fragments. Cores were not recovered from this unit. Subsistence data recovered from Block C is limited to small fragments of wood charcoal and a single fragment of butternut or walnut (see Appendix A).

Table 8. Tools Recovered from Block C.

Preforms, quartz	4
Projectile point/knives	
Kirk Corner Notched, chert	1
Flake tools	
<i>piece esquillee</i> , quartz	1
backed flake, metavolcanic	1
spokeshave, quartz	4
utilized flake, chert	1
Groundstone	
soapstone fragment	1
<b>Total</b>	<b>13</b>



The midden zone of Block C contained relatively little cultural material. Overall, the artifact distribution (Figure 22) identifies a portion of low density Early Archaic activity area in the northwestern corner of the block and an undefined Archaic area in the southeastern corner characterized by preforms.

**Block D.** This was a 9 m<sup>2</sup> unit placed in a recently evacuated pig pen just east of the standing farm house and 65 m south of Block B (see Figure 6). This area was thought to represent a more intensive Late Archaic occupation deposit. A general scatter of metavolcanic debris had been noted at the southern end of the site extending beyond the canal to Claflin's shell midden site (9Ri(DOT)27). Although the block contained the highest percentage of metavolcanic material of any unit, metavolcanics accounted for only 6.7% of the total lithics in Block D.

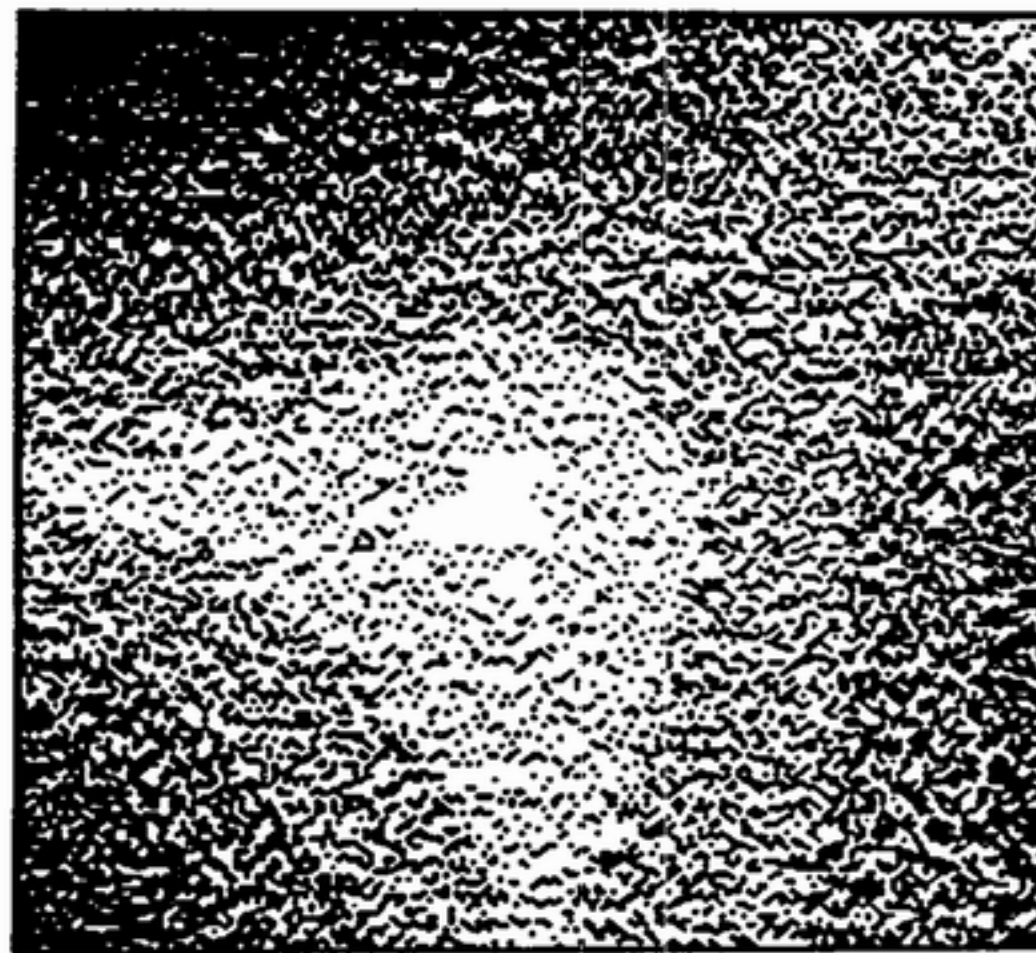
The sub-plowzone cultural deposit in Block D was 10 cm thick, but was widely contaminated. One potential feature was excavated and found to be a large root disturbance. Block D contained a sufficiently large collection of historic material to suggest a thorough mixing of the deposit. The hand-excavated zone appears to represent the base of plowzone or a pig rooting zone, with the darker soil color resulting from differences in soil moisture. Because of this disturbance, flotation samples were not taken.

The increased percentage of metavolcanics, the presence of soapstone, and the recovery of one eroded sand-tempered punctated sherd, indicate that Block D may be associated with a Late Archaic/Early Woodland occupation (Table 9). Block D, then, provides evidence that the canal has divided a larger Late Archaic/Early Woodland habitation site. The recovery of an Early Archaic Kirk Corner Notched and a Middle Archaic Stemmed point from the plowzone indicates earlier occupation at the same location, as well.

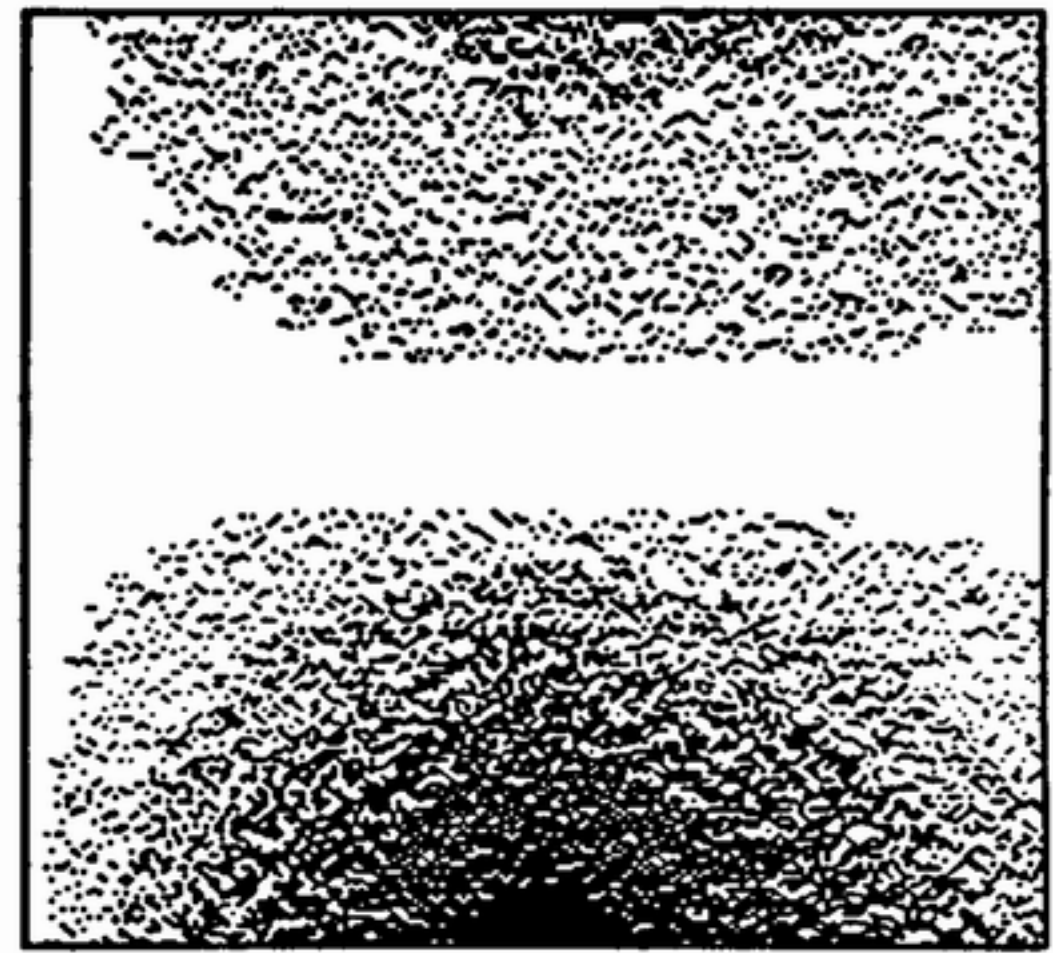
**Table 9. Tools Recovered from Block D.**

Surface		
Projectile point/knives		
	Kirk Corner Notched, chert	1
Midden		
	Preforms, quartz	11
	Projectile point/knives	
	Middle Archaic stemmed, quartz	1
	Flake tools	
	utilized blade-like flake, chert	1
	<i>piece esquillee</i> , quartz	1
	utilized flakes, quartz	6
	Groundstone	
	soapstone fragment	1
	celt/axe fragment	1













**CHIPPED STONE DEBRIS**



**FIRE CRACKED ROCK**

**505N  
507E**

**505N  
509E**

   <b>S</b>		
		<b>P</b>  <b>S</b>
	<b>PP</b>	<b>P</b>

-  **KIRK**
-  **SCRAPER**
-  **WEDGE**
-  **FLAKE TOOL /  
UTILIZED FLAKE**
- S** **SOAPSTONE**
- P** **PREFORM**

**502N  
507E**

**502N  
509E**

**TOOL DISTRIBUTION**

**Figure 22. Block C Midden Zone Distribution Map.**



Overall, Block D is similar to the other units in low tool diversity, low number of ground stone tools, and the presence of biface manufacturing debris.

**Block E.** This was a 4 m<sup>2</sup> block placed at the extreme northern edge of the project area in a small wooded area near the edge of the borrow pit (see Figure 6). The 12 cm thick sub-plowzone deposit could not be confidently identified as a midden zone and may, in fact, be a buried plowzone.

Block E produced few tools and little diagnostic material (Table 10). Neither complete projectile points nor soapstone were found. Tool diversity, raw material percentages, and evidence for quartz biface manufacturing is consistent with other units.

**Table 10. Tools Recovered from Block E.**

Preform, quartz	1
Projectile point/knife fragment, chert*	1
Flake tools	
perforator, chert*	1
utilized flakes, quartz	3
Groundstone	
small celt/axe	1

\**patinated*

**Summary.** The hand-excavated units were vital for determining site stratigraphy and site formational processes. All of the blocks provided some evidence for interpreting site function. Finally, the blocks showed that upland Piedmont sites, although severely eroded, can contain preserved cultural deposits.

The Early and Middle Archaic data recovered from Blocks A-C are important for overall site interpretation. The tool assemblage identified in the blocks parallels that found in plowzone and surface collections across the site. While Early and Middle Archaic points were commonly found, formal unifacial tools such as hafted endscrapers were not. This implies a limited function during the Paleoindian, Early, and Middle Archaic utilization of the site. Tool forms associated with long term habitation activities (hide working, wood working, or plant processing tools) such as scrapers, burins, adzes, and *pieces esquillees* are a minor part of the early tool assemblages at the site.

Although the Late Archaic occupation is conspicuous in the block data, most of the original cultural deposit is now mixed in the plowzone. However, the presence of hearths, ground stone tools, and larger quantities of chipped stone tools suggests an intensive use of the site at this time. The Late Archaic occupation is seen as an extension of a larger site plan centered upon the shell midden and apparent habitation area to the east of the canal (see Figure 2). The few preserved nut fragments seem to be as-



sociated with the Late Archaic/Early Woodland occupations. The presence of hickory nuts and acorns is common for this time period and may be used as an indication of late fall to winter occupation.

A preserved midden deposit was unexpected. The project area occupies a typical eroded upland ridge-like landform and the midden deposit was first interpreted as buried slope wash. Further testing confirmed that some cultural features originated within the zone and were intrusive from a higher level. The cultural integrity of the zone is thus confirmed. A single backhoe trench (Trench 14 extension) confirmed that this deposit extends to the east of the project boundary to a nearly level area that may actually have been the focus of prehistoric activity.

### Machine-Stripped Block Excavations

**Machine Block 1.** This 7 by 16 m (112 m<sup>2</sup>) block at the northern edge of the project area, was placed on a small knoll-like projection of the main bluff line. A distinct midden zone was not visible, but three features were identified (Figure 23).

The artifacts recovered during stripping and shovel shaving included both Archaic and historic material (Table 11). Features included a single historic postmold and two

**Table 11. Machine Block 1, General Collection.**

Quartz lithic debris	5
Quartz preforms	8
Projectile point/knives	
Archaic Stemmed, chert	1
Late Archaic Stemmed, quartz	1
Bifaces	
Ovate, quartz	3
chopper, metavolcanic	2
Unifacial tools	
lamace, quartz	1
Flake tools	
<i>piece esquillee</i> , quartz	1
Groundstone tools	
axe/celt, metavolcanic	1
chopper, metavolcanic	1
<b>Prehistoric total</b>	<b>24</b>
Hand painted British export porcelain	1
Blue hand painted pearlware	1
<b>Historic total</b>	<b>2</b>



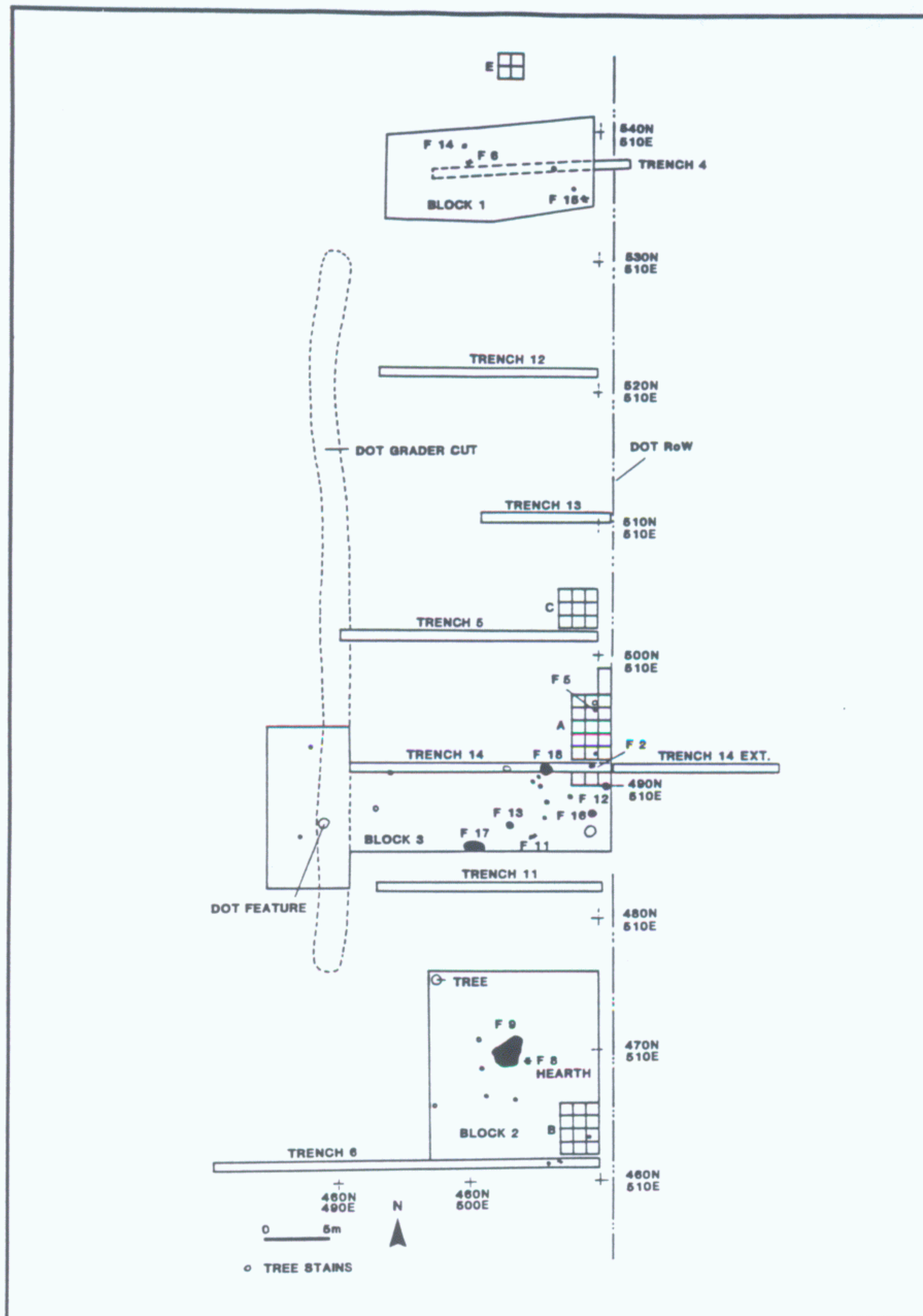


Figure 23. Plan Map of the Northeast Portion of the Project Area Showing Excavated Blocks.



Archaic rock clusters. The post lies adjacent to an existing fence line and is probably a fence post. Both rock clusters contained soapstone artifacts, and are, therefore, Late Archaic. One rock cluster (Feature 6) also contained a lanceolate biface.

Machine Block 1 and the exposed surface of the surrounding small knoll contained projectile points diagnostic of the Paleoindian and Early, Middle, and Late Archaic periods. Since a midden zone was lacking, the only prehistoric data of consequence was the material recovered from two Archaic features (Features 6 and 15).

**Machine Block 2.** This 13 by 14 m (170 m<sup>2</sup>) block was placed between Trenches 6 and 11 and encompassed hand-excavated Block B (see Figure 23). The artifact collection contained Archaic and historic nineteenth/twentieth century artifacts (Table 12).

Machine stripping uncovered several subsoil stains, most of which were identified as tree stains (see Figure 23). Feature 8, a large rock concentration, lay within a thin midden zone and is apparently a dispersed Late Archaic hearth.

Feature 9 contained a late Mississippian Lamar vessel within a large, amorphous burned area. The vessel lay on its side and was visible in profile just below plowzone. Half of the vessel was missing, presumably from plowing. The vessel was not crushed and was filled with a dark midden soil containing charcoal and nut fragments. After excavation, the large stain around the vessel was interpreted as a tree fall. A tree stain 2 m to the south of Feature 9 also contained a large late Mississippian sherd. Unfortunately, no preserved Mississippian pits or postmolds were identified in the block.

Machine Block 2 was significant with respect to two components. First, the stripping provided further evidence for the utilization of the site during Late Archaic/Early Woodland times. The identification of only one intact Archaic feature, the Feature 8 hearth, attests to the dispersed nature of the occupation within the area. Second, the recovery of large sherds from Feature 9 and an adjacent tree stain provides evidence for a late Mississippian Lamar component.

**Machine Block 3.** This, the largest excavated area in the project area, was placed to the north of Machine Block 2 to encompass an area where features had been discovered (Bowen 1984). Also, the placement included a further investigation of the Archaic deposits in Block A (see Figure 23).

An area 26 m long with a width varying from 6 to 12.5 m covered an area of 192 m<sup>2</sup>. The general collection (Table 13) contained several early points, including Paleoindian lanceolate, Kirk Corner Notched, Middle and Late Archaic Stemmed, in addition to aboriginal and historic ceramics.

One Archaic hearth was found. The hearth (Feature 11), composed mostly of unmodified soapstone cobbles, was identified at the top of the midden zone, 10 cm above sterile soil.



**Table 12. Machine Block 2, General Collection.**

---

Lithic debris, quartz	2
Preforms	
chert	1
quartz	14
Projectile point/knives	
Kirk Corner Notched, chert	1
Morrow Mountain, quartz	1
Middle Archaic Stemmed, quartz	1
Late Archaic Stemmed, chert	2
Late Archaic Stemmed, quartz	1
Projectile point/knife fragments	
chert	7
quartz	4
Bifaces	
ovate, quartz	5
adze, quartz	1
chopper, metavolcanic	1
Flake tools	
burin, quartz	2
notched scraper, chert	1
utilized flake, chert	5
utilized flake, metavolcanic	7
Groundstone	
worked soapstone	1
soapstone fragment	4
hammerstones	2
<b>Prehistoric total</b>	<b>64</b>
Blue transfer printed whiteware	2
Plain whiteware	1
Decal decorated whiteware	1
Green bottle glass	1
<b>Historic total</b>	<b>5</b>

---



**Table 13. Machine Block 3, General Collection.**

---

Lithic debris	
chert	1
quartz	6
Preforms	
chert	2
quartz	19
Projectile point\knives	
Paleoindian lanceolate, quartz	1
Kirk Corner Notched, chert	2
Kirk Corner Notched, quartz	1
Middle Archaic Stemmed, quartz	1
Late Archaic Stemmed, metavolcanic	1
Late Archaic Stemmed, quartz	1
Projectile point/knife fragments	
chert	1
quartz	1
Bifaces	
ovate, quartz	2
lanceolate, quartz	1
drill, chert	1
Flake tools	
hafted endscraper, quartz	1
backed flake, quartz	1
utilized flakes, chert	2
utilized flakes, quartz	4
utilized flakes, metavolcanic	2
Groundstone	
soapstone, ground cobble	1
soapstone netsinker	1
soapstone sherd	1
pitted cobble	5
pitted cobble/hammerstones	2
Plain, grit-tempered sherds	3
<b>Prehistoric total</b>	<b>62</b>
Plain pearlware	1

---



Several pits were encountered at the eastern end of the excavation (Features 12, 13, 16, 17, and 18). The pits ranged from 50 to 60 cm in width and 14 to 93 cm in depth. All originated above the midden zone and most contained Mississippian sherds. The contents were generally sparse with little preserved bone or charcoal.

No postmolds were found, therefore, the features may be the bottoms of once deep pits. Feature 18, however, contained a fill composed of lumps of fired clay. The feature may be a prepared hearth or earth oven. Feature 17 is substantially larger and may represent a large, bell-shaped storage pit or perhaps a burial pit. The remaining three features seem to be small storage pits.

This cluster of Mississippian features is remarkable in light of the overall sparsity of ceramics on the site. The sherds were widely distributed (see Figure 13), but less than 100 sherds were found on the entire site. The plowzone sampling gave no indication of the presence of a cluster of Mississippian features.

The feature contents may account for the scarcity of sherds. The pits contained midden fill, a mixture of Early Archaic, Late Archaic, and Mississippian artifacts. Since this fill represents the soil surrounding the pit at the time of refilling, the absence of a large number of sherds suggests that a Mississippian midden had not developed at the time of feature use. Possibly the features lie at the periphery of the Mississippian habitation area. The pits may also indicate specialized use of the area or a relatively short duration of occupation. Significantly, the Mississippian features consistently contained sparse amounts of charred seeds from spring fruiting plants (see Appendix A) that could indicate a springtime occupation.

The machine stripping of large areas confirmed the dispersed nature of the Archaic occupation. The only Archaic features identified were widely scattered rock hearths, most of which appeared to be Late Archaic or Early Woodland. Archaic or Woodland storage pits were not found within the project area.

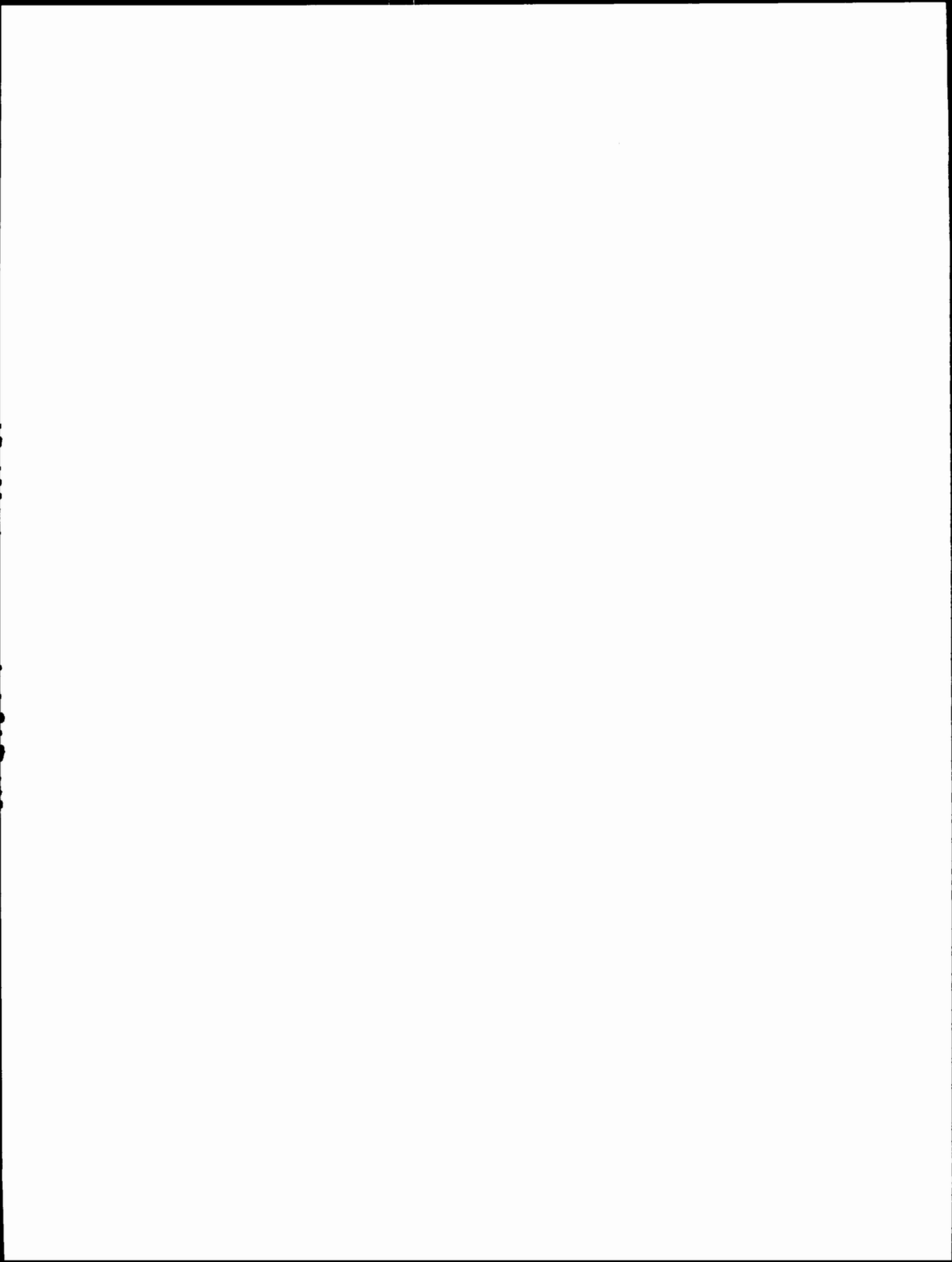
Stripping uncovered evidence of more intensive Mississippian occupation than indicated by previous testing. A Mississippian component had been recognized earlier, but the eroded condition of the sherds were taken as evidence that Mississippian features would not be preserved.

## **Feature Descriptions**

Initial testing at 9Ri158 (Bowen 1984:9-15) determined that cultural material was restricted to plowzone deposits and subsurface features. Also, discovery of a small area of intact midden at the extreme eastern edge of the right-of-way provided stratigraphic context for several of the features uncovered during data recovery.

Bowen (1984:11) found four features within two grader cuts. The four prehistoric features were interpreted as three posts and one small pit. All of these showed some evidence of root disturbance. The present investigations uncovered 67 possible cultural







features (subsoil stains and rock clusters) within an excavated area of 819 m<sup>2</sup>. All features were mapped and later excavated. Half of each feature was first excavated so that a profile could be recorded. If the profile indicated that the feature was cultural, a feature number was assigned and the remainder was excavated.

The fill from tree root stains were generally soft with an abundance of charcoal. Many contained the visible remains of burned tap roots. In contrast, cultural features were characterized by extremely dense, well consolidated soil and little charcoal.

A total of 18 feature numbers were assigned during the course of fieldwork. Two of these proved to be tree roots. The disturbed remains of one Mississippian pit (Feature 9) identified in a treefall, was evident only by a portion of a Mississippian jar and the soil it contained. The remaining 15 included four historic posts, five prehistoric pits, and six Archaic rock clusters.

**Historic Postmolds (Features 1, 3, 4, and 14).** Historic postmolds were found at the northern edge of the project area and just south of the remains of a twentieth century barn. These features appeared as square or rounded pit outlines with central post impressions (Figure 24).

Features 3 and 4, identified in Trench 15, were apparently portions of a wall or enclosure attached to the barn. Feature 3 (Figure 25) was a round, clay-packed pit, 30 cm in diameter, with a central postmold. The post had been removed and the cavity filled with brick rubble and modern trash. Half of the feature was excavated and a sample of the brick was saved.

**Feature 3 contents (1/4 inch screened):**

---

Machine made brick fragment	1
Wire nails	7
Clear bottle glass	3
<b>Total</b>	<b>11</b>

---

Feature 4, located 6 m east of Feature 3, was nearly identical in dimensions. The post pit was 30 cm in diameter and 30 cm deep. The postmold was packed with brick and concrete rubble. Again, only half of the feature was excavated.



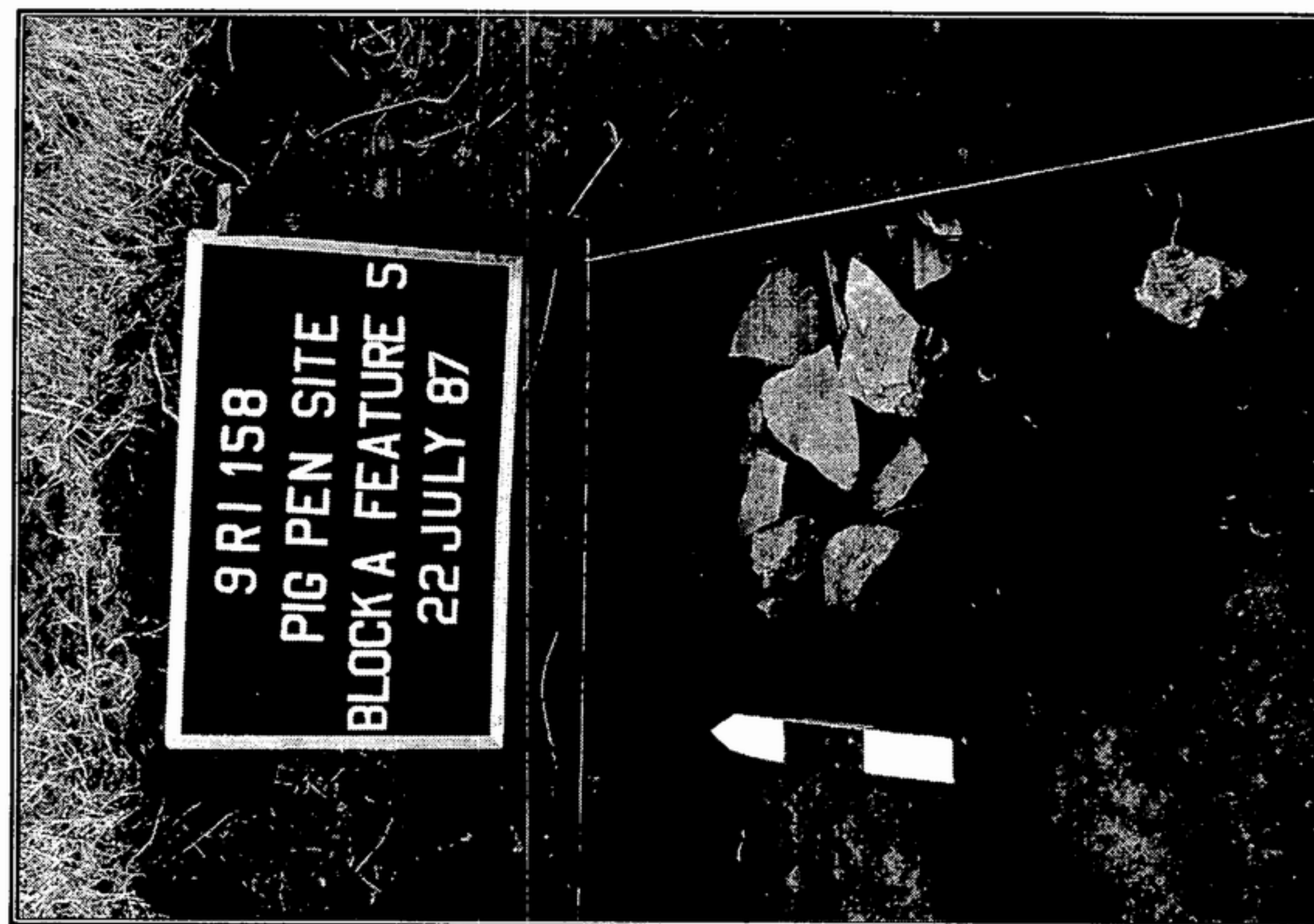


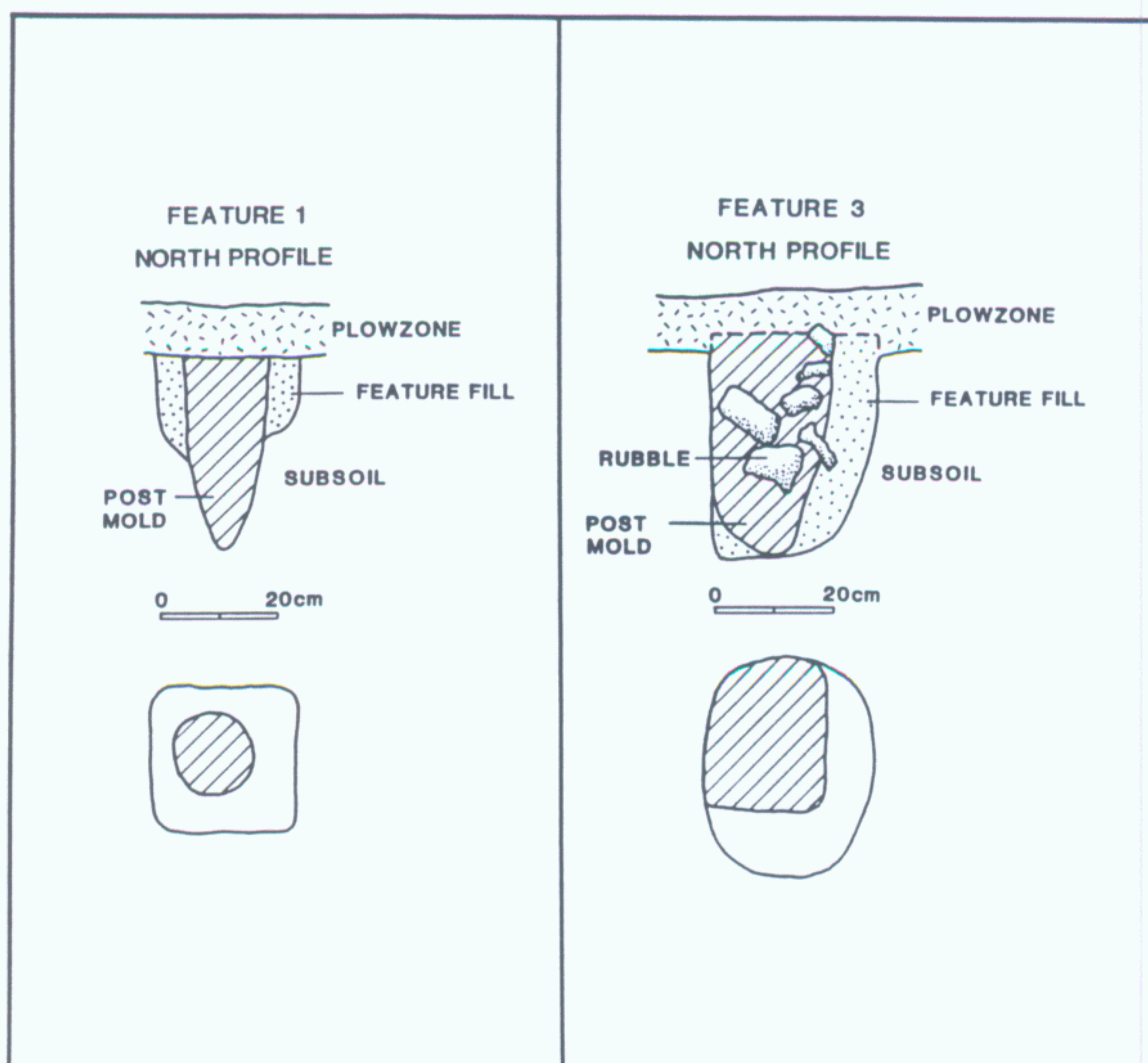
Figure 24. Features 1 and 5 from 9Ri158.



**Feature 4 contents (1/4 inch screened):**

Machine-made brick fragments	2
Concrete fragments	2
Wire fence staples	3
Brown salt-glazed stoneware	1
<b>Total</b>	<b>8</b>

Examination of 1980 aerial photographs provided by the DOT shows a fence line perfectly aligned with Features 3 and 4. The posts, no doubt, were part of an animal pen that was removed during the last decade.



**Figure 25. Historic Features, Postmolds Excavated on 9Ri158.**



Features 1 and 14 were isolated historic features found in Trench 1 and Machine Block 1, respectively. Since no structures were evident in adjacent excavations, Features 1 and 14 were probably the remains of fence posts.

Feature 1 was a square post hole 25 cm wide, with a central circular postmold impression (see Figures 24 and 25). The feature extended to 35 cm below the base of plowzone. Although Feature 1 is probably a nineteenth century fence post, only prehistoric material was recovered from it.

**Feature 1 contents (1/4 inch screened):**

---

Chert interior flake	1	
Quartz interior flakes	2	
Metavolcanic interior flake	1	
Chert bifacial thinning flake	1	
Quartz bifacial thinning flakes	3	
Quartz shatter	3	
Quartz preforms	2	
Chert utilized flakes	1	
Unmodified rock	4	(51.8 g)
<b>Total</b>	<b>18</b>	

---

The fill of Feature 1 was extremely compact, plowzone deposit. The number of prehistoric artifacts recovered from the feature may be an indication of the density of plowzone material on the ridge crest during the nineteenth century.

Feature 14 was identified next to an existing fence line and is probably of twentieth century construction. The roughly square post hole was 40 cm wide and the rounded postmold stain measured 22 by 26 cm. Unlike the compact fill of Feature 1, the postmold fill of Feature 14 was soft. The feature was not excavated. Coring showed a depth of 80 cm. The central stain of Feature 14 is probably the decomposing remains of the post.

**Aboriginal Pits, Features 12, 13, 16, 17, and 18.** Medium to large, pit-like features were identified in a tight cluster at the eastern end of Machine Block 3. Three of the pits contained a few Mississippian ceramics, probably Protohistoric Lamar. Unfortunately, a wider area around the features was not uncovered due to two factors. First, the pits were found at the edge of the right-of-way, and the more promising area was beyond the project boundaries. Second, the features were exposed at the end of the fieldwork and recognized on the final day.



The features were generally small, rounded-bottomed pits 50 to 95 cm in diameter and 8 to 23 cm deep. Feature 17, however, was substantially larger, measuring 160 cm in width and 95 cm in depth. Feature contents were generally a sparse mixture of Mississippian and Archaic midden material. However, Feature 18 contained little cultural material and was packed with fired clay. It was probably a hearth.

Feature 12 (Figure 26) was a circular pit 55 cm in diameter and 23 cm deep. The feature was identified at the base of the Archaic midden but was obviously intrusive. The feature was well defined with a dark fill contrasting with a brown clay matrix.

**Feature 12 contents (1/8 inch screened):**

---

Lithics			
	Chert corner-notched projectile point/knives	1	
	Quartz interior flakes	2	
	Chert bifacial thinning flakes	3	
	Quartz bifacial thinning flake	1	
	Fire cracked rock	7	(35.0 g)
	Unmodified rock	15	(14.2 g)
Ceramics			
	Grit-tempered corn cob impressed	1	
<b>Total</b>		<b>30</b>	

---

A 14 liter flotation sample produced wood charcoal and single fragments of hickory nut, butternut/walnut, and acorn (Appendix A).

Feature 13 was similar to Feature 12 in terms of contents, fill, and size. The feature was 50 cm in diameter and 14 cm deep. Unfortunately, the feature contained a burned tree root. The root disturbance puts the cultural integrity of the feature into question.

The location of the feature within a small cluster of similar pits suggests that it also was of Mississippian origin. However, nothing in the feature fill substantiated this supposition. Because of disturbance, a flotation sample was not taken from this feature.

Feature 16 (see Figure 26) was located approximately 2 m south of Feature 12 and was similar to the Features 12 and 13. The oval feature measured 63 by 70 cm and was 20 cm deep. The northern half of the feature was 1/4 inch screened and the southern half was 1/8 inch screened. The 1/8 inch screened sample contained no subsistence evidence. The artifact totals listed below represent a combined count. Like the preceding two features, the pit contained little cultural material.



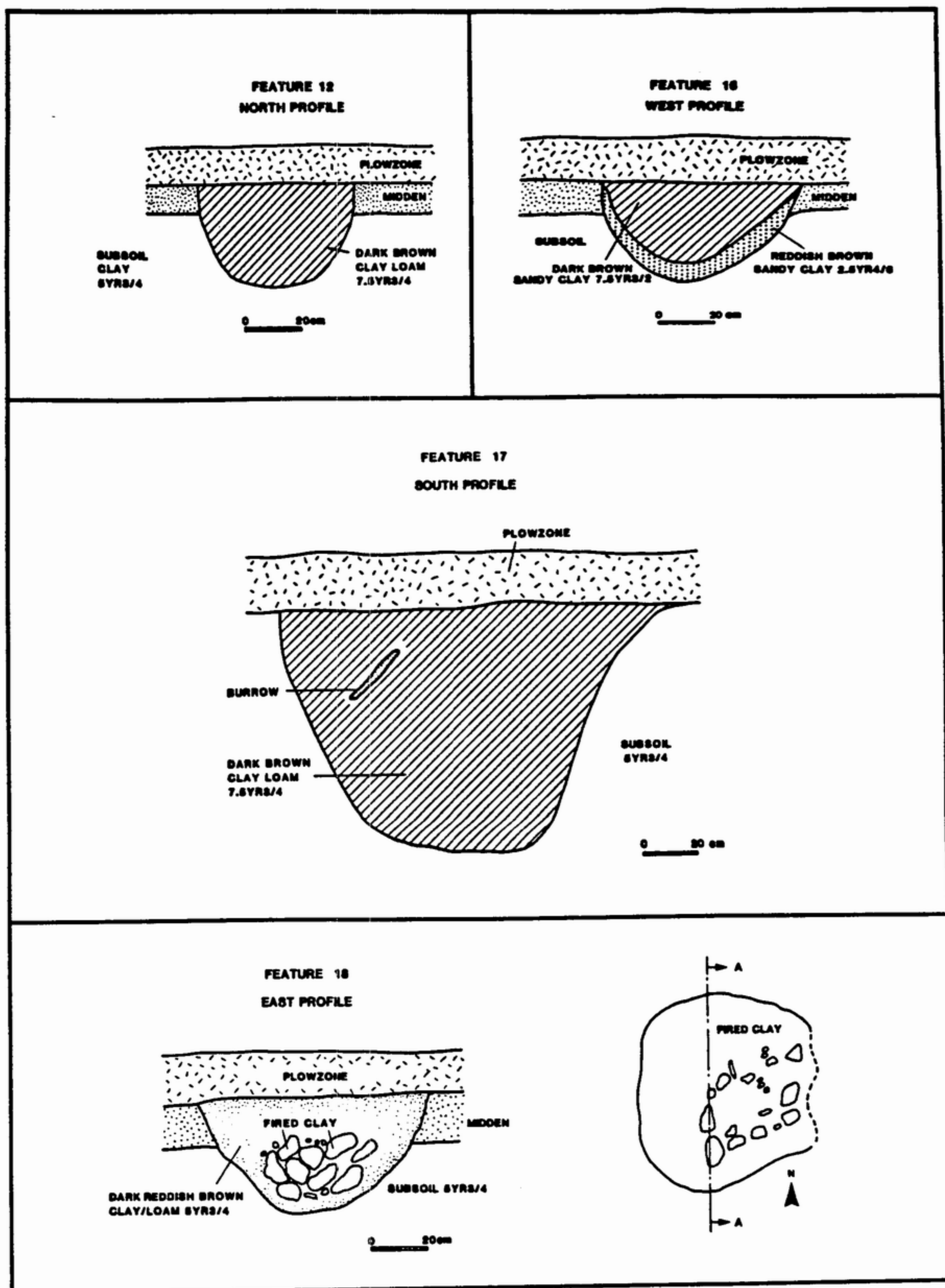


Figure 26. Prehistoric Pits Excavated at 9Ri158.



**Feature 13 contents (1/4 inch screened):**

---

Quartz interior flakes	2	
Metavolcanic interior flake	1	
Chert bifacial thinning flakes	5	
Quartz bifacial thinning flakes	2	
Chert shatter	1	
Quartz shatter	2	
Fire cracked rock	1	(23.2 g)
Unmodified rock	13	(46.5 g)
<b>Total</b>	<b>27</b>	

---

**Feature 16 contents (1/4 inch and 1/8 inch screened):**

---

Lithics		
Quartz interior flakes	3	
Metavolcanic interior flakes	2	
Chert bifacial thinning flakes	8	
Quartz bifacial thinning flake	1	
Quartz shatter	7	
Unmodified rock	6	(60.5 g)
Ceramics		
Grit-tempered rectilinear complicated stamped	1	
Grit-tempered plain	1	
<b>Total</b>	<b>29</b>	

---

The single decorated sherd is a poorly executed Mississippian stamped sherd. The design and execution of stamping is similar to other Lamar sherds found on the site. The 14 liter flotation sample contained hickory nuts, plus single fragments of butter-nut/walnut, acorn, and gum seed (see Appendix A).

Feature 17 (see Figure 26) is a large, slightly bell-shaped pit. The feature was identified at the edge of Machine Block 3 so that only 2/3 of the contents were recovered. The feature measured 160 cm at maximum width and was oval in plan view. The maximum depth below definition was 93 cm. Definition was at the top of the midden zone, indicating a post-Archaic origin. The feature may have been either a storage pit or a burial pit. Badly decomposed bone flecks were found near the bottom of the pit.



**Feature 17 contents (1/4 inch screened):**

---

**Lithics**

Quartz ovate bifaces	2	
Metavolcanic side scraper	1	
Metavolcanic chipped stone axe fragments	2	
Chert utilized flake	1	
Quartz utilized flakes	2	
Metavolcanic utilized flakes	2	
Quartz secondary flakes	5	
Chert interior flakes	3	
Quartz interior flakes	22	
Quartz bipolar flakes	5	
Chert bifacial thinning flakes	15	
Quartz bifacial thinning flakes	7	
Chert shatter	5	
Quartz shatter	16	
Quartz cores	2	
Quartz core trimming flakes	3	
Soapstone perforated object fragment	1	
Worked soapstone fragments	2	
Mano	1	
Fire cracked rock	32	(703 g)
Unmodified rock	60	(1435 g)

**Ceramics**

Grit-tempered rough plain	1
Grit-tempered plain	2

**Total****192**

---

A 28 liter flotation sample taken from the base of Feature 17 contained wood charcoal and seeds from three spring flowering plants: barberry, bayberry, and smilax (see Appendix A). Neither hickory nuts nor acorns were recovered from the pit.

Most of the fill appears to be Late Archaic. The small amount of Mississippian material in the feature suggests that there was little Mississippian midden around the feature at the time of its use. Three grit-tempered sherds found suggest that the feature is Mississippian. The temper of the sherds is similar to decorated Lamar sherds found on the site, but finer designation is not possible.

Feature 18 originally appeared to be a burned tree. However, unlike other burned trees found on the site, there was not a fired clay, bark-impressed outer edge to this feature. Upon excavation, it was determined to be a cultural feature containing small scattered flecks of charcoal and massed lumps of fired clay concentrated near the center (see Figure 26). The feature had well defined sides and a rounded bottom, measured



75 by 95 cm, and was 18 cm deep at definition. The feature was clearly intrusive into the Archaic midden, suggesting a late association. The 1/4 inch screened fill contained primarily fired clay with only two pieces of lithic material.

**Feature 18 contents (1/4 inch screened):**

---

Preform fragment	1	
Fire cracked rock	1	(15 g)
Fired clay		(2300 g)
<b>Total</b>	<b>2</b>	

---

The 15 liter flotation sample removed from this feature contained some seed fragments, consisting of a single hickory nut fragment and one grape seed. But the variety of species identified from wood charcoal was sufficient to indicate repeated burning in the feature. The sample included four different trees: hickory, pine, red oak, and white oak.

Feature 18, therefore, was a fired clay hearth or earth oven. A Mississippian affiliation is suspected based on point of origin and proximity to nearby Mississippian features.

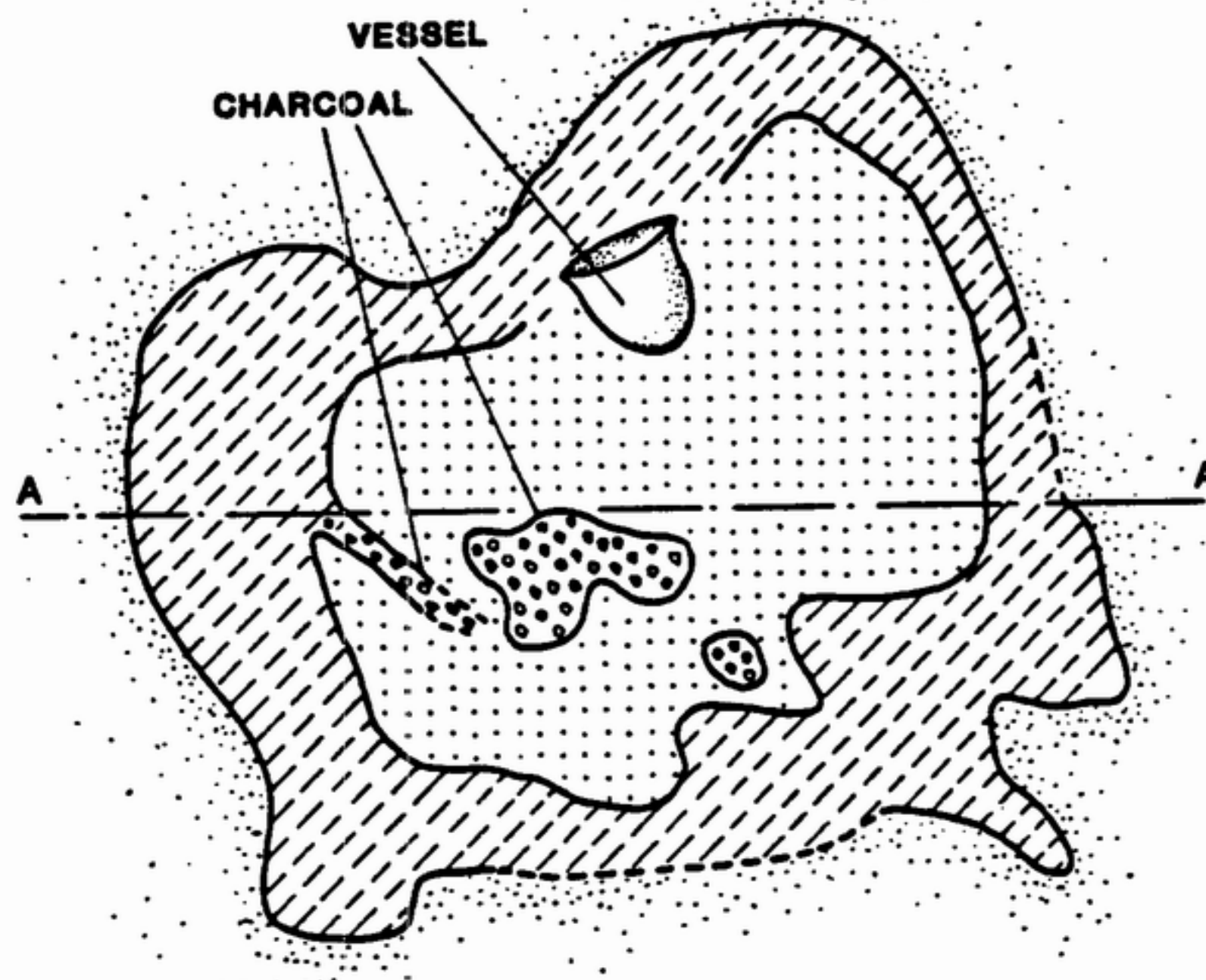
Feature 9, a tree fall, contained half of a large Mississippian Lamar jar (Figure 27). The jar is complicated stamped with a wide folded and pinched rim. Laying on its side, half of the jar was probably plowed away (Figure 28). The jar contained a dark midden fill that contrasted with the mottled clay of the surrounding tree fall. The vessel may be part of a feature disturbed by the treefall or a feature excavated into an old treefall. The vessel appears unused, showing no evidence of sooting or pitting. Below are listed the contents of one half of the tree fall.

The mixed contents of the tree fall fill are of limited value. However, the vessel and its contents are critical to the interpretation of the late ceramic period occupation of the site. The jar is a typical late Lamar vessel, probably dating from the mid-sixteenth to mid-seventeenth century. Seeds recovered from a 3.5 liter flotation sample within the vessel represent both fall and spring species: hickory, barberry, and bayberry.

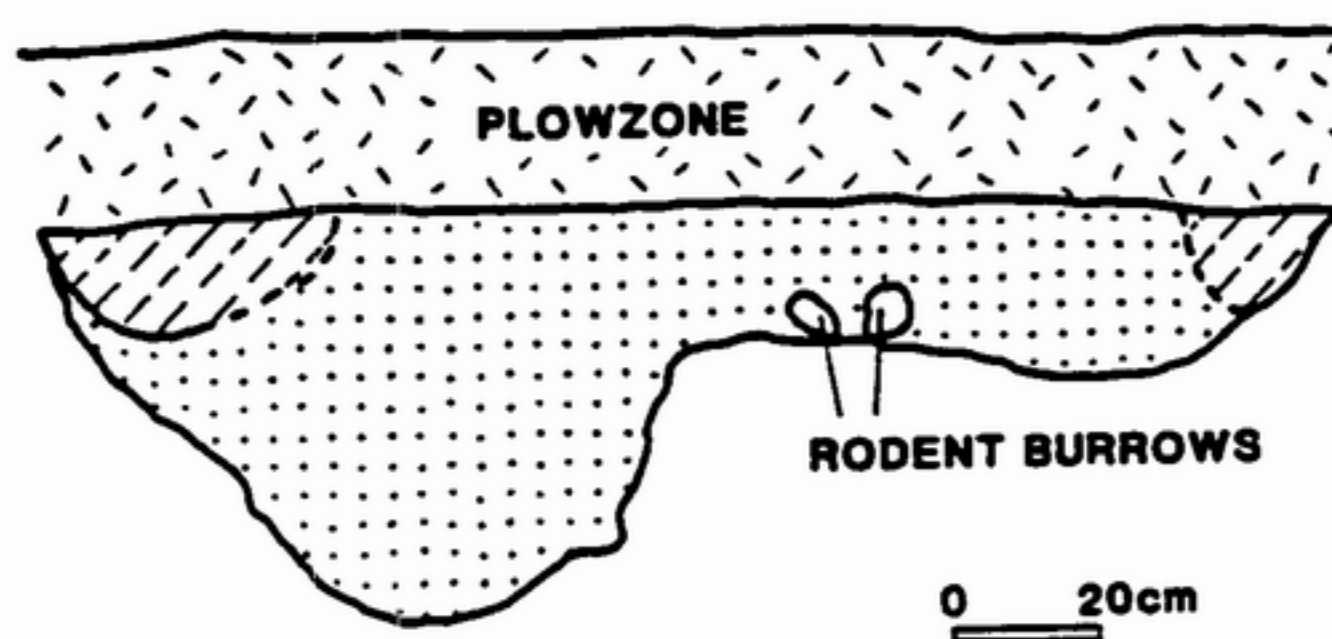
**Rock Clusters (Features 2, 5, 6, 8, 11, and 15).** This feature category, although restricted to the preserved midden, was the most widespread across the site. Most appear to be rock hearths, but this is inconclusive (see Figure 24). Neither stains nor charcoal were present. A few of these features were not well concentrated and may actually have been the contents of shallow pits.



# FEATURE 9



## NORTH PROFILE A-A




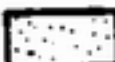
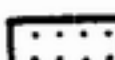
-  DARK BROWN LOAM WITH CHARCOAL 7.5YR4/3
-  MOTTLED BROWN CLAY 2.5YR6/3
-  BRIGHT ORANGE CLAY 2.5YR8/4

Figure 27. Feature 9, a Tree Fall Containing a Mississippian Vessel.



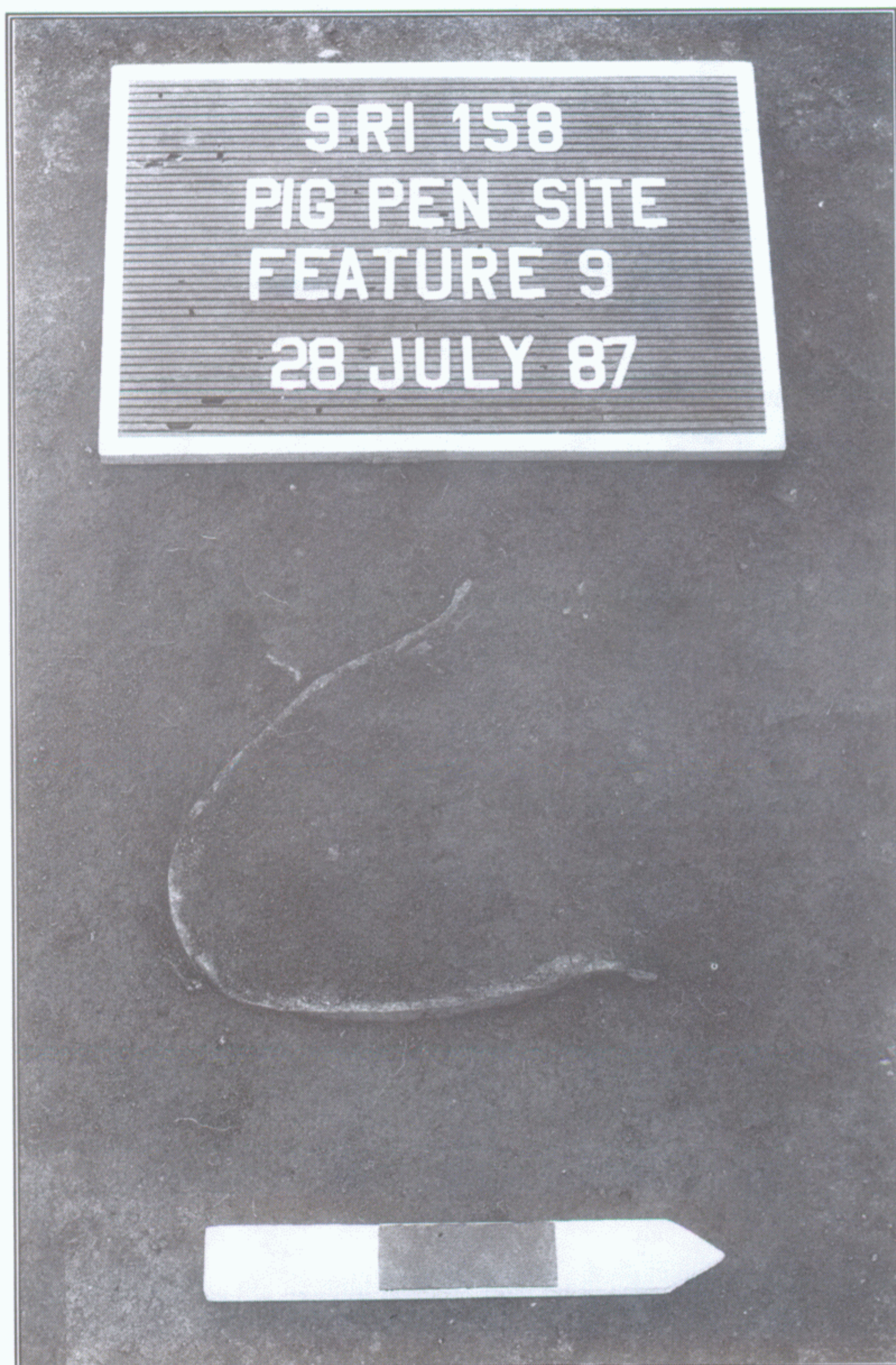


Figure 28. Lamar Vessel in Feature 9 at Base of Plowzone.



**Feature 9 contents (1/4 inch screened)**

---

**Lithics**

Quartz secondary flakes	11	
Chert interior flakes	2	
Quartz interior flakes	15	
Metavolcanic interior flakes	1	
Quartz bipolar flakes	2	
Chert bifacial thinning flakes	10	
Quartz bifacial thinning flakes	15	
Quartz shatter	32	
Quartz projectile point/knife fragment	1	
Quartz preform	4	
Soapstone atlatl weight	1	
Fire cracked rock	5	(38.7 g)
Unmodified rock	63	(741.8 g)

**Ceramics**

Lamar Complicated Stamped (1 vessel)	22	
plain, grit-tempered	1	
fired clay	34	(154 g)

**Total****219**

---

Cultural affiliation is difficult to determine, but all seem to date to the Archaic period. Worked soapstone in several clusters suggests that some were Late Archaic. However, unmodified soapstone cobbles in others may simply suggest a readily available rock source. Stratigraphically, these features appeared consistently near the top of the Archaic midden which, again, points to the Late Archaic.

Feature 2 was found in Trench 14 and was partially disturbed during stripping. The feature lay just below the plowzone at the top of the Archaic midden zone. It measured 60 by 65 cm and was composed of a single layer of stone. Diagnostic artifacts were not found in association with the feature.

**Feature 2 contents (1/4 inch screened):**

---

Chert interior flakes	2	
Pitted cobble/hammerstone fragments	2	
Fire cracked rock	1	(16 g)
Unmodified rock	50	(1044 g)
<b>Total</b>	<b>55</b>	

---



Feature 2 was probably a partially dispersed hearth made from locally available metamorphic cobbles and discarded ground stone tools. A 1.5 liter flotation sample contained small pieces of charred hickory, pine, and white oak, plus hickory nut and grass (see Appendix A).

Feature 5 (see Figures 24 and Figure 29) was a well preserved rock hearth found just below plowzone at the top of the Archaic midden. The feature contained predominantly local metamorphic rock with some discarded ground stone tools. The feature measured 30 by 35 cm and was 4 cm thick.

**Feature 5 contents (1/4 inch screened):**

---

Chert utilized flake	1	
Metavolcanic utilized flake	1	
Quartz bifacial thinning flake	1	
Metavolcanic bifacial thinning flake	1	
Metavolcanic axe	1	
Pitted cobble/hammerstone	1	
Hammerstone fragment	1	
Fire cracked rock	19	(2458 g)
<b>Total</b>	<b>26</b>	

---

The large ground stone tools found in this feature are similar to Late Archaic tool styles. The stratigraphic position of the feature also supports a Late Archaic origin. A 2 liter flotation sample produced a small amount of pine charcoal (see Appendix A).

Feature 6 was found intruding into the subsoil in Machine Block 1. Although there was no stain, the slanted position of several artifacts suggests the bottom of a shallow basin. The dispersed scatter of stone covered an area of 30 by 52 cm with a depth of 8 cm.

**Feature 6 contents (1/4 inch screened):**

---

Quartz lanceolate projectile point/knife	1	
Partial perforated soapstone cobble	1	
Fire cracked rock	4	(330 g)
Unmodified rock	3	(128 g)
<b>Total</b>	<b>9</b>	

---



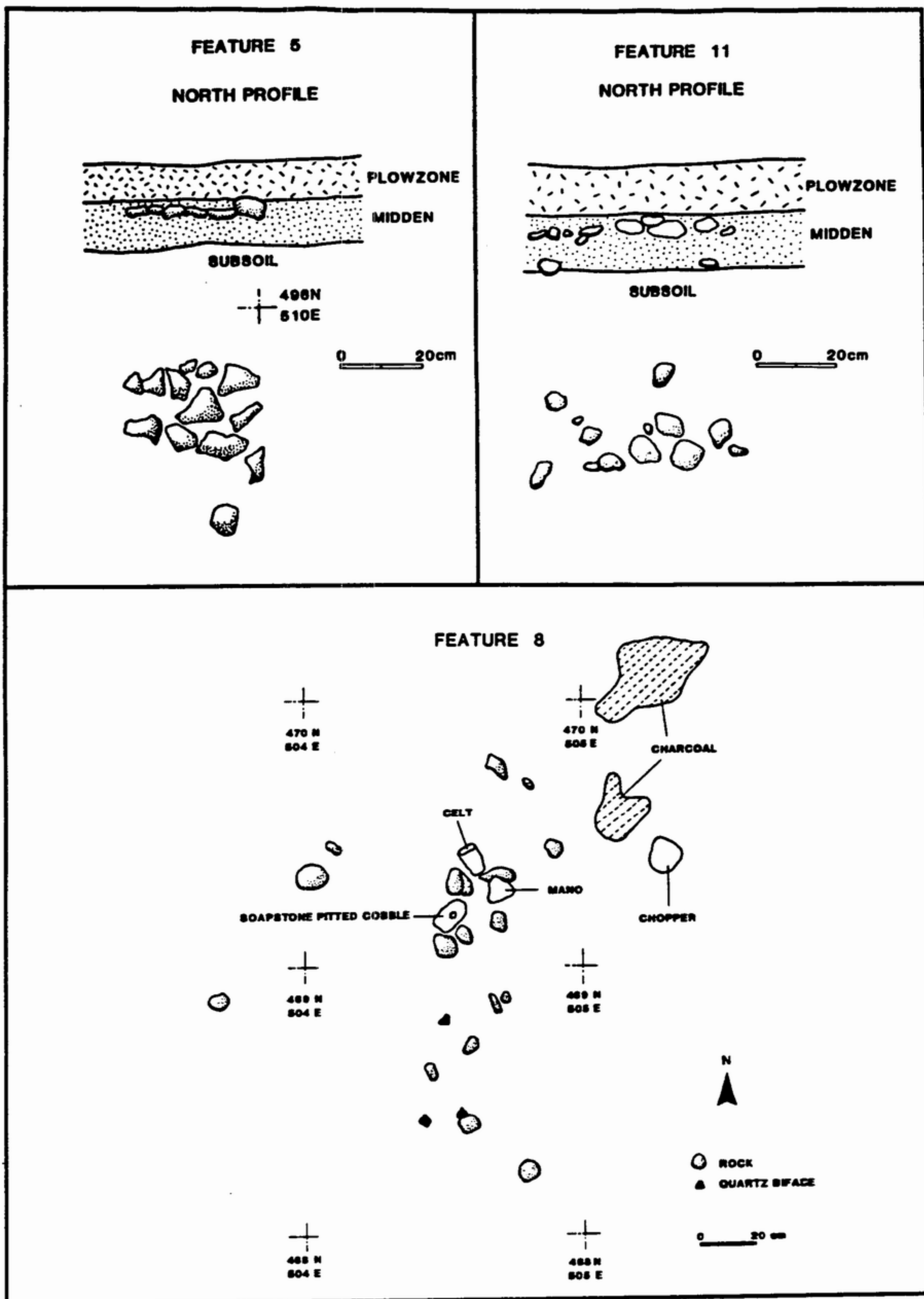


Figure 29. Archaic Rock Hearths from 9Ri158.



Feature 6 contained two potentially diagnostic artifacts. The biface is a well made lanceolate point with ground haft and incurvate base. The base has been damaged and shows an attempt at reworking. The shape is similar to Paleoindian and Early Archaic biface styles, but is also similar to the late Middle Archaic Guilford or Briar Creek Lanceolate point. The association of worked soapstone and Guilford points would not be entirely unexpected since intensive use of soapstone is firmly tied to the beginnings of the Late Archaic period. The biface, however, is wider than most described Guilford points and may simply be an example of nondiagnostic Archaic bifacial knife. Neither bone nor charcoal was recovered from the 2 liter flotation sample.

Feature 8 was found at the bottom of a shallow midden deposit in Machine Block 2. The feature was uncovered during shovel shaving and the rock cluster and the surrounding rock scatter was plotted (see Figure 29). The overall scatter measured 135 by 165 cm, although the primary cluster was concentrated in an area of 30 by 40 cm.

**Feature 8 contents (1/4 inch screened):**

Quartz projectile point/knife*	1	
Quartz preforms**	3	
Quartz shatter	2	
Pitted soapstone cobble	1	
Metavolcanic ground stone celt	1	
Metavolcanic chipped stone chopping tool	1	
Metavolcanic mano	1	
Fire cracked rock	9	(785 g)
Unmodified rock	14	(588 g)
<b>Total</b>	<b>33</b>	

\*Late Archaic rounded-stemmed; \*\*1 Archaic stemmed

The points and soapstone suggest a Late Archaic association. The pitted cobble is a natural soapstone cobble with rounded depressions on two opposing flat surfaces. The feature may represent a hearth at the upper edge of a Late Archaic or Early Woodland activity area identified in Level 1 of Block B. Small amounts of pine and oak charcoal were recovered from the feature. A single acorn fragment and three pieces of charred grass stem were recovered from a 10 liter flotation sample (see Appendix A).

Feature 11 (see Figure 29) may also be the remains of a hearth. The feature was dispersed and elongated, with the primary concentration measuring 20 by 50 cm. The feature was located at the top of the Archaic midden and non-associated cultural material was found for 10 cm below the feature.



**Feature 11 contents (1/4 inch screened):**

---

Quartz unifacial scraper	1	
Quartz utilized flake	1	
Quartz interior flakes	2	
Chert bifacial thinning flakes	8	
Quartz bifacial thinning flakes	7	
Quartz shatter	9	
Partially drilled soapstone cobble	1	
Unmodified soapstone cobbles	2	
Quartz anvil	1	
Fire cracked rock	5	(201.4 g)
Unmodified rock	15	(152.8 g)
<b>Total</b>	<b>51</b>	

---

Soapstone was a major constituent of the artifacts found in the fill. The soapstone and the stratigraphic position of the feature suggest a Late Archaic affiliation. A 10 liter flotation sample contained small amounts of hickory, pine, and oak charcoal (see Appendix A).

Feature 15 was a small concentration of rock in Machine Block 1, measuring 20 by 30 cm. The rocks appeared to be pressed into the subsoil. Most of the rocks were quartz cobbles, but one ground stone tool was present. A second ground stone tool made from soapstone was found at the same level 55 cm away. A 1.5 liter flotation sample contained small charcoal fragments of hickory, pine, and oak (see Appendix A).

**Feature 15 contents (1/4 inch screened):**

---

Soapstone pitted cobble	1	
Quartzite pitted cobble/hammerstone	1	
Unmodified rock	5	(1467 g)
<b>Total</b>	<b>7</b>	

---

The presence of pitted soapstone cobbles in the primary evidence for dating this feature to the Late Archaic period.

**Historic Structures.** The project area contains abundant evidence of twentieth century construction associated with a farm complex. A rapidly deteriorating, ca. 1900 farm house (Figure 30) occupies much of the southern portion of the project area. The wood frame house with two brick chimneys is elevated on brick piers.



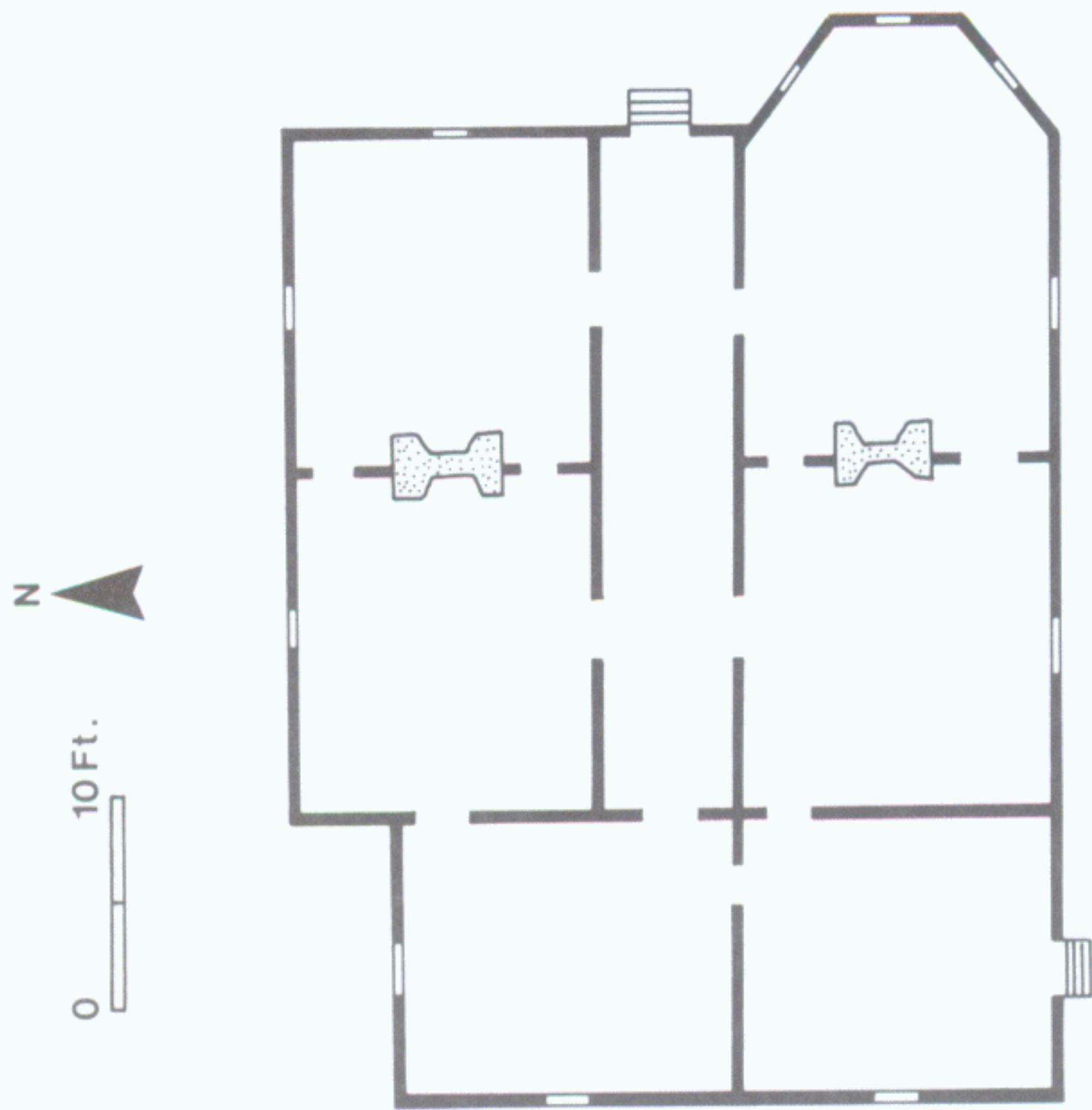
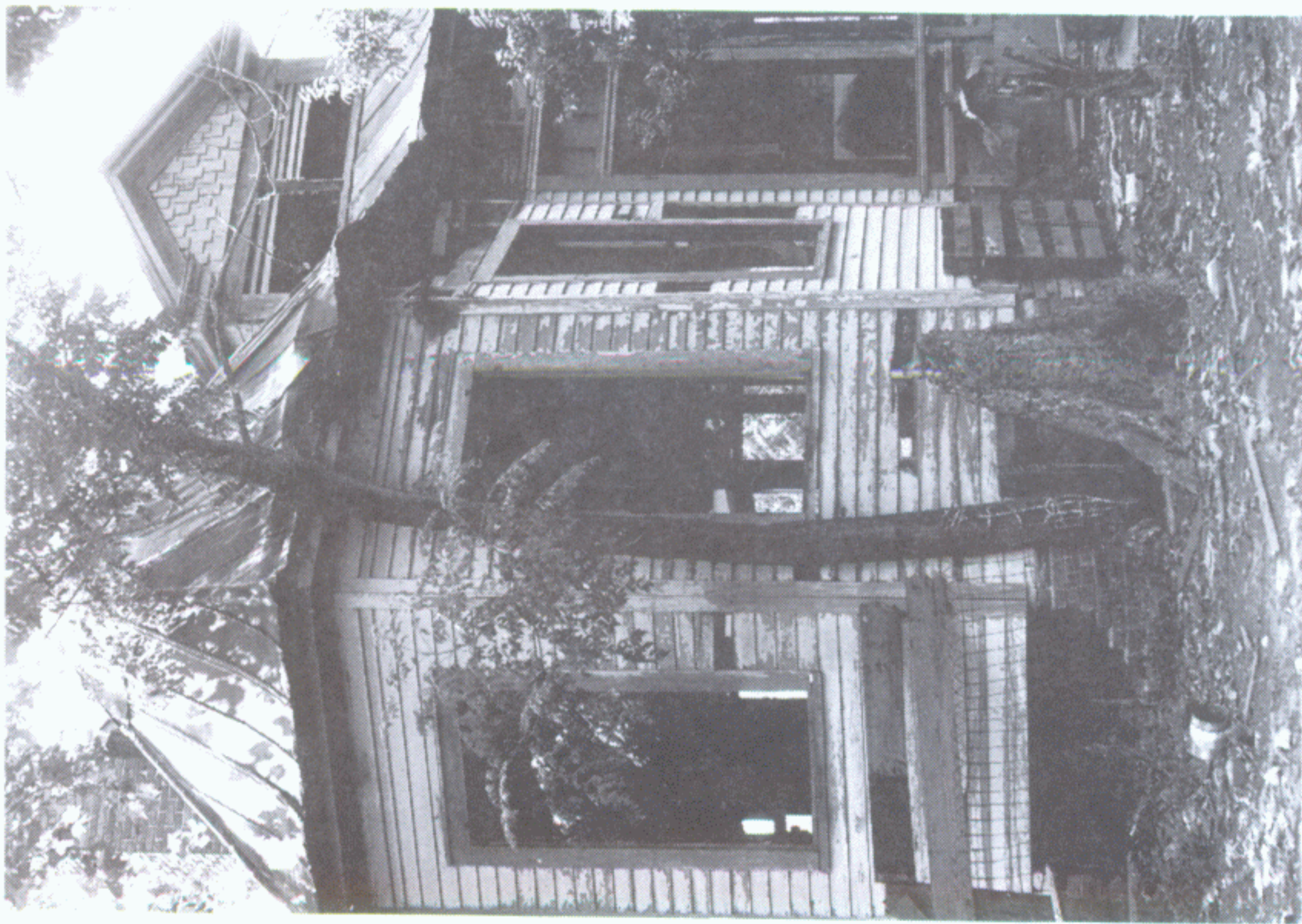


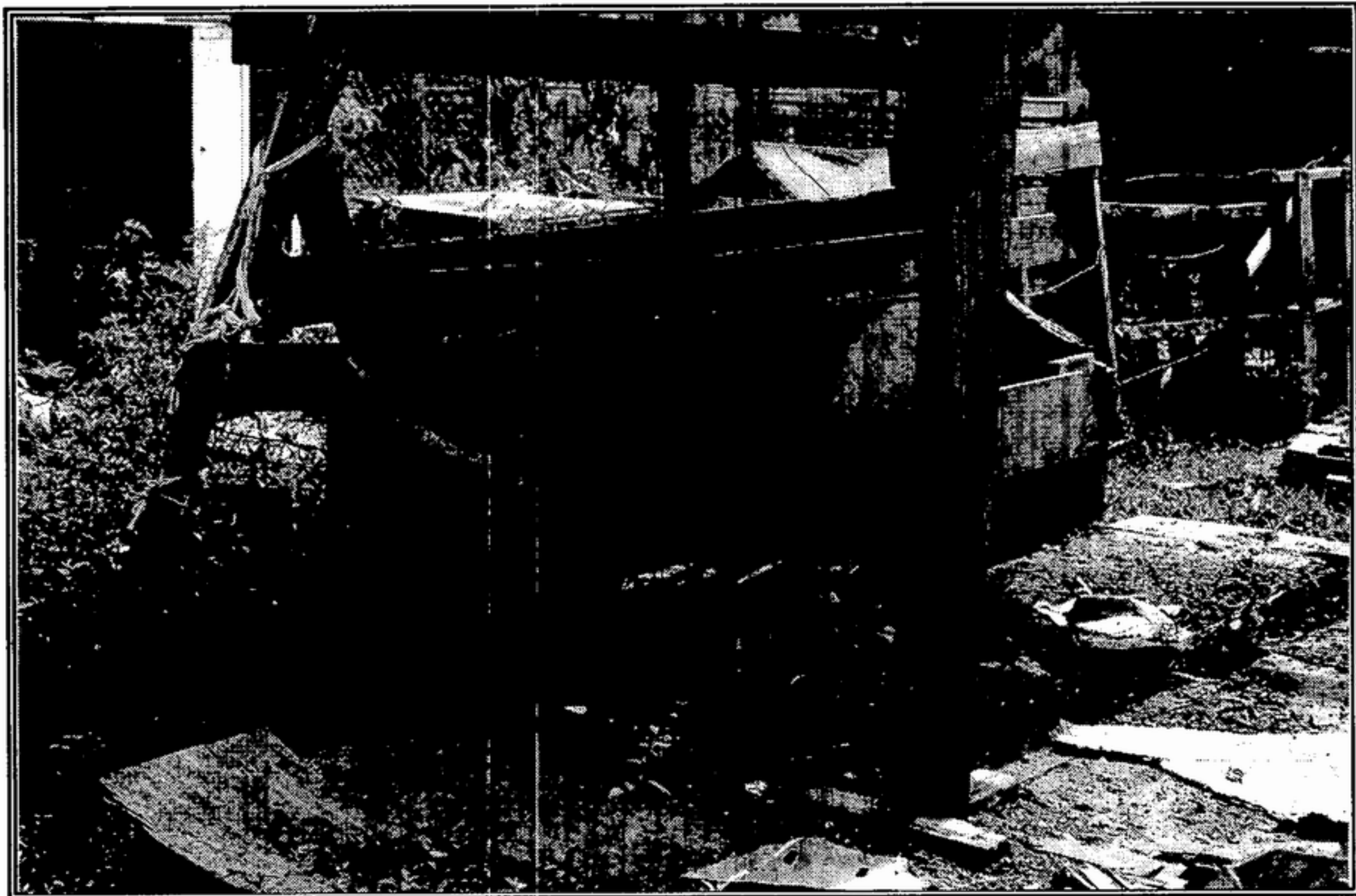
Figure 30. Exterior View and Floor Plan of Standing Structure on 9RI158.



Figure 30 also shows a floor plan of the first floor of the house. An attic contains one large room with two exterior windows. Cut nails are extensively used, a trait common to the nineteenth century. The house was last occupied as a residence in 1971.

The collapsed foundation of a brick barn is located 40 m north of the house. Three elongated rooms approximately 3 m wide form a structure measuring approximately 9 by 16 m. The foundation of a second brick outbuilding lies to the west of the barn. These are now covered by a recently constructed shed.

Several sheds have been constructed since 1971 when the area was used exclusively for livestock. The construction of this later period shows the ingenuity and the practicality of the people involved in confining cows, pigs, and goats (Figure 31).



**Figure 31. An Example of a Modern Feeding Trough on the Pig Pen Site.**



## MATERIAL REMAINS

### Artifact Descriptions

Previous discussions have primarily listed artifacts recovered from the project area by various proveniences. The present section presents definitions and synthesis of this material. Artifact measurements are limited to a few tool groups for which these attributes may be of typological value.

**Chipped Stone Tools.** Two examples of *Paleoindian lanceolate projectile point/knives*, both made from quartz, were recovered from 9Ri158. One point was found on the surface at the northeast corner of the site and one in the back-dirt adjacent to Machine Block 3.

The larger example (Figures 32 and 33a) is fragmentary, but the width can be accurately estimated at 36 mm. The thickness is 11 mm and the length of fluting for the two sides is 18 and 22 mm. The battering scars on two edges indicate the final use of the biface as a wedge. The large size of the point and presence of fluting is consistent with the description of Clovis as illustrated in Cambron and Hulse (1975:20).

The second example (Figure 33b), although smaller, also shows battering indicating use as a wedge. The point is 30 mm wide and 7.5 mm thick. A flute-like thin-

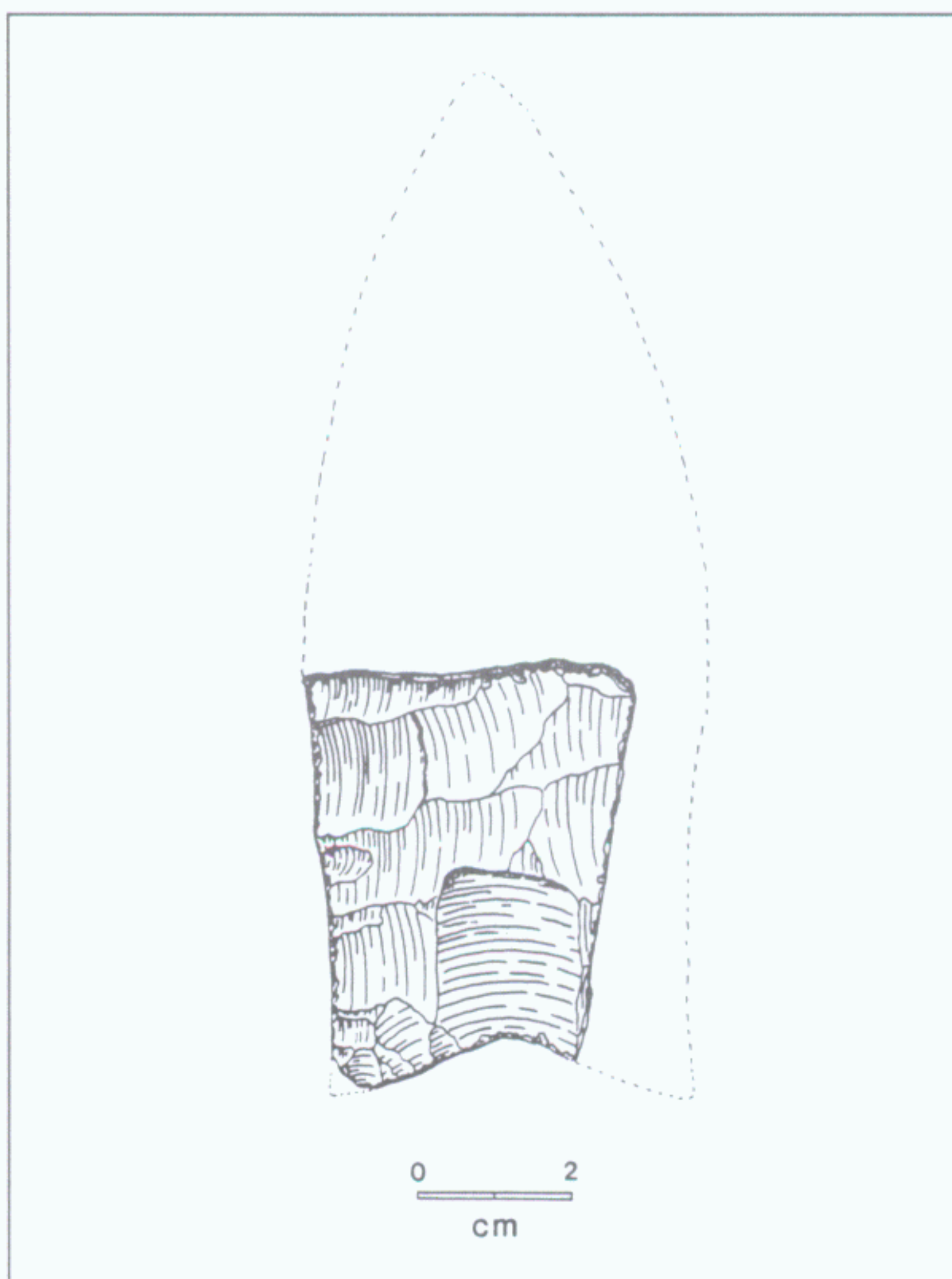
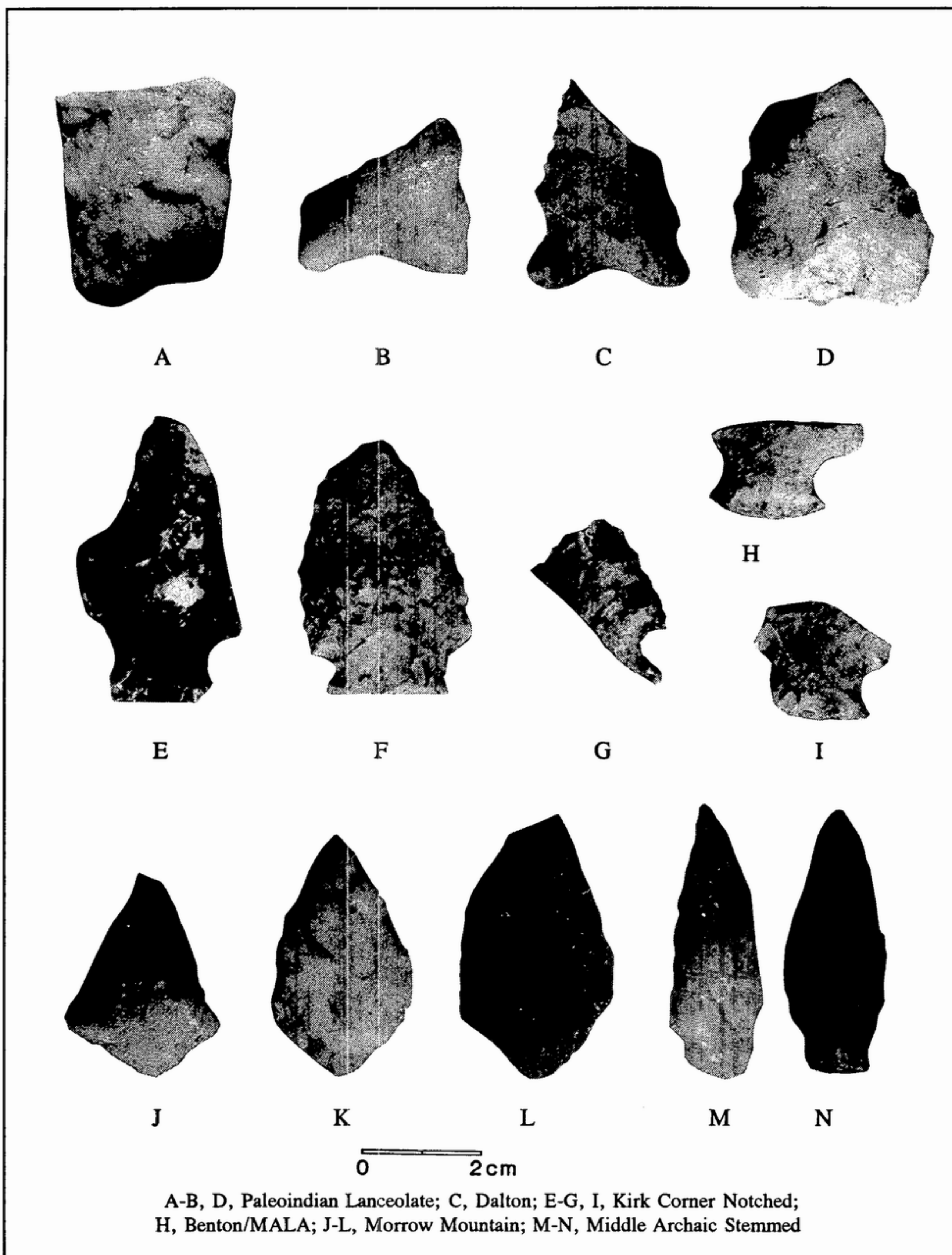


Figure 32. Paleoindian Lanceolate Projectile Point/Knife Fragment Found on 9Ri158.





**Figure 33. Examples of Paleoindian, Early Archaic and Middle Archaic Projectile Point/Knives from the Project Area.**



ning flake is visible on one side. The concave base is steeply beveled and heavily ground. The point may be either Paleoindian or transitional Paleoindian/Early Archaic.

One late stage preform (see Figure 33d) shows characteristics typical of Paleoindian lithic technology. The damaged quartz preform is lanceolate in form with a deep, flute-like thinning flake on one face. A retouched nipple, presumably intended for use as a striking platform for production of a second thinning flake, is present at the base.

Two transitional Paleoindian points similar to Coe's (1964) *Hardaway Dalton* point were recovered. One example (Figure 33c) made from a metavolcanic material is 28 mm wide and 6 mm thick. The base is well thinned and heavily ground. The blade edges are serrated on one side and worn smooth on the opposite side. The point was found in a plowzone shovel test on the central ridge of the project area. The second example was found on the surface at the southeast corner of the project area. The damaged point is made from heavily patinated chert and measures 25 mm in width and 7 mm in thickness. One blade edge is shattered while the opposite is worn smooth.

Eleven points with characteristics of *Kirk* or *Palmer Corner Notched* (Coe 1964) were recovered. Nine of these are made from chert and two are made from quartz. Most examples are fragmentary, usually represented only by the haft portions. Measurements were not taken, but the range in style of the recovered points is evident in Figure 33e-i. The variation in point form for the Early Archaic is consistent with an interpretation of long term use of the site.

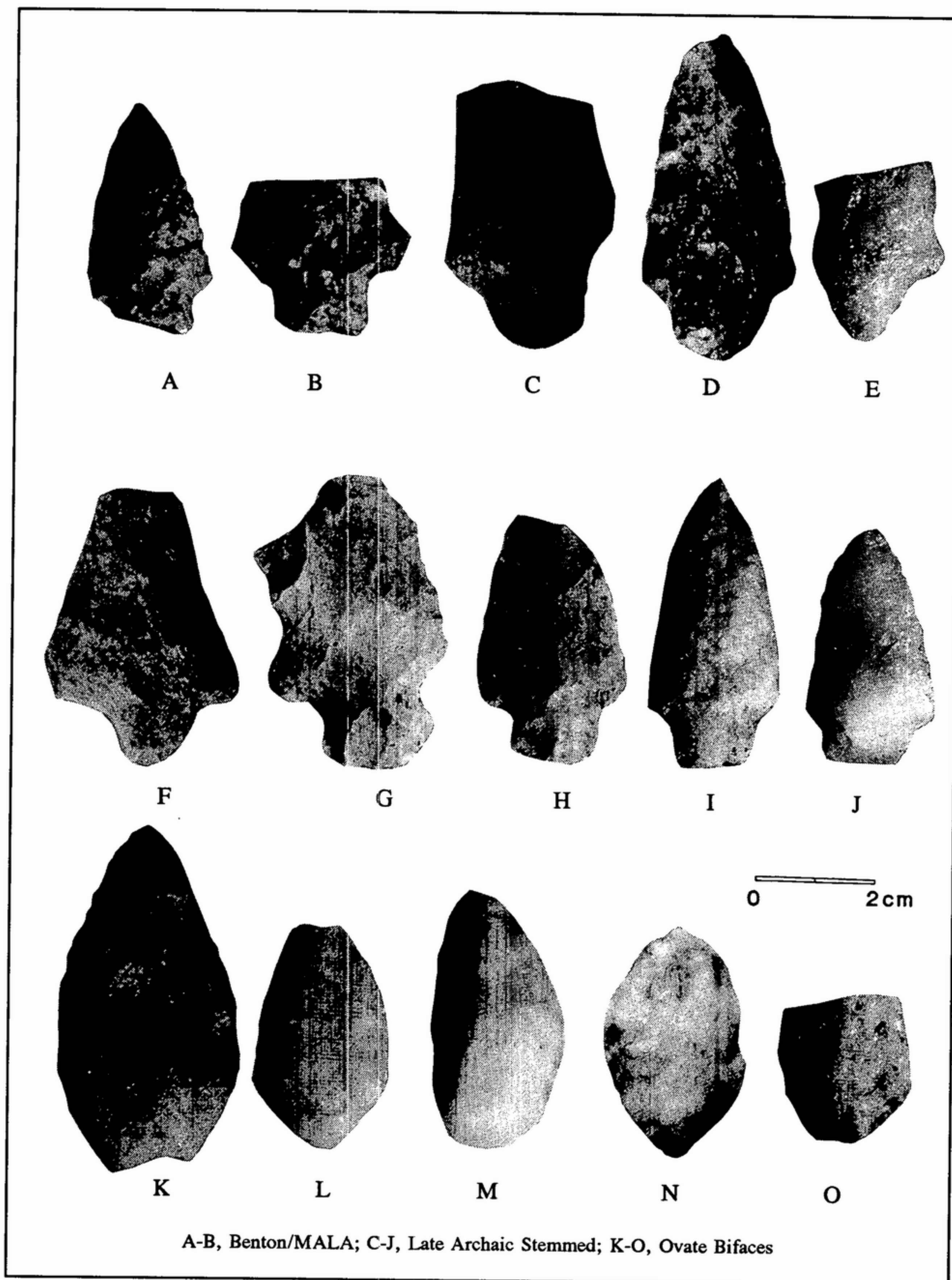
The *Middle Archaic Morrow Mountain* point form, described by Coe (1964), was found infrequently in the project area. Four examples, made from quartz, were recovered and all were found on the eastern edge of the site. The points range in length from 30 to 48 mm, in width from 24 to 28 mm, and in thickness from 4 to 7 mm (Figure 33j-l).

Eight lanceolate points with narrow, rounded, and ground stems, termed *Middle Archaic Stemmed*, were recovered (Figure 33m-n). This is a Middle Archaic point form recognized in the East, but it has not been designated as a type in the Southeast. The point style is equivalent to the Merrimack Stemmed point of New England (Dincauze 1976) and the small stemmed point (type 627) of the Little Tennessee Valley (Chapman 1977:28-30; Cridlebaugh 1977:55). In the Piedmont, the point is often identified as Morrow Mountain II (Coe 1964).

The examples recovered from 9Ri158 are made from a high quality, milky variety of quartz. Measurements taken from five of the most complete examples range from 41 to 50 mm in length, 18 to 22 mm in width, and 8 to 9 mm in thickness. Basal damage is evident on six examples. The point was evenly distributed across the site.

Five *Late Middle Archaic Corner/Side Notched* points, similar in form to Benton (Cambron and Hulse 1975:12) were recovered from the project area. Two examples (Figure 34a-b), made from heat-treated Coastal Plain chert, correspond to the regional





**Figure 34. Examples of Late Middle Archaic, Late Archaic/Early Woodland Projectile Points and Ovate Bifaces from the Project Area of 9Ri158.**



variant described as Mala (Sassaman 1985). Three quartz points, which include two examples recovered during earlier testing (Bowen 1984), are more similar to Halifax (Coe 1964).

A late Middle Archaic corner notched tradition has recently been recognized for the middle Savannah River region. Attributes separating Benton (Mala) points from Early Archaic Kirk Corner Notched include lack of basal grinding and a higher incidence of thermal alteration on Benton points.

Measurements from five points have a width range of 23 to 33 mm for chert and 20 to 25 mm for quartz. Thickness for all examples consistently range from 8 to 9 mm. Stem length for two quartz points is 7 mm while the two chert examples range from 8 to 9 mm. The points were recovered from a 100 m wide area of the crest at the center of the project area.

Twenty-two *Late Archaic Stemmed* points were recovered. Most of these fall within Bullen and Green's (1970) late Savannah River forms. Several of the points appear similar to the Terminal Archaic/Early Woodland Gary form (Suhm et al. 1962). Eight points are made from quartz, ten from chert, and four from metavolcanics. These points were found consistently along the eastern edge of the project area and along the crest near the center of the area. The variation in point styles suggests that several components ranging from the early part of the Late Archaic to the beginning of the Early Woodland are represented. Measurements are not presented, but the full range of styles is illustrated in Figure 34c-j.

Nondiagnostic *projectile point/knife fragments* were recovered from all portions of the site. The 145 fragments recovered include 83 of quartz, 53 of chert, and 9 of metavolcanic material.

An *ovate biface* is a bifacial knife with a rounded base. The category represents a generalized Archaic biface form that cannot be attributed to specific components except in clear stratigraphic associations. Twenty-two examples were recovered from all portions of the site. Although all examples were made from quartz, there was considerable variation in the quality of quartz. The range in variation of quartz ovate bifaces is presented in Figure 34k-o.

Only one *drill*, made from chert, was recovered from the project area. The form is consistent with Late Archaic styles (Elliott and Doyon 1981).

A number of often fragmentary examples of *large bifacial tools* were recovered from the site. Thick bifaces are large, percussion-flaked tools similar to preforms but with definite edge wear indicating use for cutting or scraping. This category included 3 quartz, 5 metavolcanic, and 2 chert examples. Choppers (Figure 35a) are large, crude, minimally retouched or edge retouched tools made predominantly from locally available metavolcanics (9 of 10). The primary form appears axe-like, but there is no evidence of hafting. Several of these tools were associated with Late Archaic/Early Woodland features.



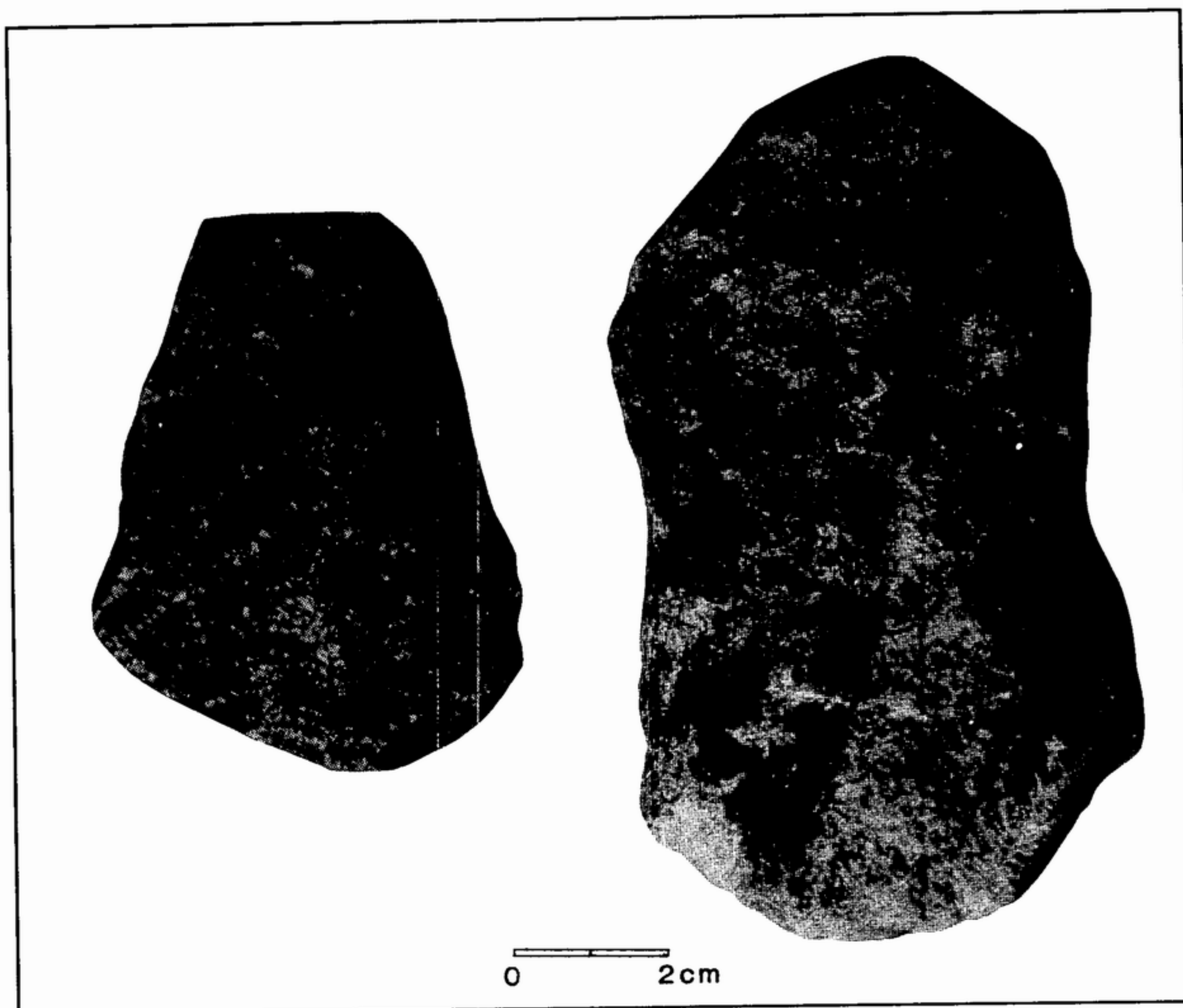


Figure 35. Examples of Large Bifacial Tools from 9RI158. *Left, Chopper; Right, Axe.*

Five crude, chipped stone *axes* were recovered, all made from locally available metamorphic stone (Figure 35b). Three of the five were recovered in features and most appear associated with the Late Archaic/Early Woodland component.

One quartz *oval biface* example was recovered. The biface is 30 by 36 mm and 16 mm thick. The tool appears to be a cutting implement.

Three quartz tools similar to forms identified as woodworking *adzes* were recovered. One is bifacial and does fit the description of a Dalton adze as described by Goodyear (1974:39). The remaining two are crude unifacial forms similar to the "humped backed scraper" (Goodyear 1974:39. Edge angle for the bifacial example is approximately 40 degrees, while the two unifacial examples range from 60 to 70 degrees.

*Unifacial scrapers* were infrequently encountered. A total of only six quartz, one chert, and one metavolcanic scrapers were identified in the collections. Most are fragments of large, crude, sidescrapers. An example from Block B is similar to an Early/Middle Archaic



endscrapers made from a thin flake. An example found in Block C is concave and similar to a hafted spokeshave (see Figure 21). Classic Paleoindian or Early Archaic teardrop-shaped endscrapers were not found. Some scraping activities were probably accomplished with bifaces or utilized cores (see below).

*Expedient tools* include a variety of tool forms that were fashioned with minimal effort by utilizing or minimally retouching a piece of lithic debris.

*Utilized flakes*, flakes showing evidence of edge damage resulting from use as a cutting implement, were the most common tool found on the site. Utilized flakes are most often pieces of lithic debris that happened to be of appropriate shape and size for a task. A total of 196 utilized flakes were recovered and appear to be associated with all proveniences. One hundred and forty-one are quartz, 39 chert, and 16 metavolcanic. One utilized blade-like flake made from chert was also recovered. This tool form was manufactured primarily from secondary and interior flakes.

*Perforators* are drill-like tools made by unifacially or bifacially retouching a projection on a flake. Ten perforators were made from quartz while only one was made from chert. This tool form is distributed across the project area and cannot be tied to specific components.

*Gravers* are bone or woodworking tools recognized by a short but stout projection on a flake or any flaked stone tool. Gravers found on 9Ri158 were widely scattered and included 8 quartz and 1 chert examples.

*Burins* are bone or woodworking tools formed by the removal of one or more flakes along the long axis of a piece of debris or tool. Only three burins were identified and all were made from quartz. One example was manufactured from a biface fragment in the Early to Middle Archaic cultural deposit of Block A (see Figure 16).

Only one *denticulate*, a deeply serrated flake tool, was recovered. This tool, recovered from a shovel test was made from quartz. Saw-like tools, or denticulates, are comparable to the deeply serrated projectile point/knives of the Early Archaic.

*Backed flakes* are made by retouching the edge of a flake in order to make a blunt or smooth surface opposite the cutting edge. Five examples, four quartz and one metavolcanic, were recovered. The tool cannot be correlated with any one component.

*Pieces esquillees* are wedge-like tools produced by driving a flake (or biface) of appropriate shape into a hard surface. Well used examples show abundant step fractures along the battered edge and columnar or shear fractures along the edges. The 13 widely scattered tools found on the site were manufactured entirely from quartz.

*Core tools* were used as cutting or scraping tools. Five of these core tools were found in the Archaic midden of Block A. The general form is a truncated or polyhedral shape with the working edge at the flattened surface.



**Lithic Debris.** Waste material resulting from chipped stone tool production was the predominant artifact class recovered from 9Ri158. Debris accounted for 94.6% of the chipped stone recovered from shovel tests and 95.7% from the hand-excavated blocks. These excavation units provided the best quantified samples for lithic debris (Table 14).

Debris represents the by-products of the production of stone tools. *Primary* and *secondary flakes* result from the initial reduction of a natural cobble. Primary flakes contain over 90% cortex, while secondary have less than 90% cortex. *Interior flakes* or tertiary flakes have no cortical covering and are flakes removed during subsequent reduction.

A *biface thinning flake* is generally a small, thin, often curved, flake that was produced during the resharpening process for a biface. These flakes exhibit a faceted platform and multiple flake scars on the outer surface.

A *bipolar flake* is a blocky piece of material that shows evidence of percussion from two opposing edges. This results from the use of an anvils tone during the reduction process.

*Shatter* or formless debris is normally produced at an early stage and is the result of improper striking of a cobble or core.

A *core* is a discarded piece of raw material from which flakes have purposefully been removed. A *core trimming flake* is a fragment of a core specifically removed to prepare a new striking platform.

**Table 14. Debris Categories Represented in Shovel Tests and Block Excavations.**

Category	Shovel Tests		Blocks	
	N	%	N	%
Primary Flake	41	2.2	108	3.9
Secondary Flake	112	5.9	261	9.3
Interior Flake	603	31.9	894	32.0
Bipolar Flake	48	2.5	104	3.7
Biface Thinning Flake	466	24.7	1257	45.0
Shatter	565	29.9	118	4.2
Core	16	0.8	15	0.5
Core Trim Flake	2	0.1	9	0.3
Preform	36	1.9	28	1.0
<b>Total</b>	<b>1889</b>	<b>100</b>	<b>2794</b>	<b>100</b>



*Bifacial thinning flakes* generally result from resharpening of a finished biface or projectile point. These flakes are usually small and have a faceted striking platform, having been struck from the edge of a biface.

A final debris category referred to as a *preform* is used to identify early stages of bifaces that have been discarded due to flaws or manufacturing breakage.

9Ri158 contains debris associated with both tool production and maintenance. Quartz, a locally available raw material, is the predominant raw material accounting for 82.2% of the debris in the shovel tests and 79.7% in the blocks. Coastal Plain chert accounts for 10.4% of the debris in shovel tests and 15.6% in the blocks. Metavolcanics represent 7% of the debris in the shovel test and 4.7% of the debris in the blocks. Overall, quartz occurs in all debris categories, while chert and metavolcanics occur primarily in later stage categories such as interior and bifacial thinning flakes (see Appendices B and C).

A significant difference in one debris category appears in Table 14. The table shows a substantially higher percentage of shatter in the shovel test (plowzone) collections as compared to the midden collections of the block excavations. This is undoubtedly due to plow damage in great part, although differential use of the site area that might result in the production of greater amounts of shatter cannot be totally discounted.

**Ground Stone Tools.** Tools made from pecking or grinding are generally of limited diagnostic value. However, the use of soapstone suggests that the largest proportion of ground stone at 9Ri158 is part of the Late Archaic assemblage. Soapstone is most often associated with the Late Archaic (ca. 3500-800 B.C.). Five pieces of soapstone were recovered during earlier testing of the site (Bowen 1984) and are included with the collections from data recovery.

*Soapstone* from 9Ri158 included 15 modified pieces, 3 unmodified cobbles, and 32 pieces of debris. The unmodified cobbles suggests a nearby source. A soapstone outcropping is supposedly on Rae's Creek (White 1849:506).

Three soapstone vessel fragments were recovered from the plowzone and upper part of the midden around Machine Block 3. Two pieces are thin and appear to be part of finished bowls. The third piece is thick and may be part of an unfinished vessel.

Two fragments of perforated soapstone slabs were recovered from Machine Block 3. Both are very thin and are probably parts of finished artifacts. This artifact was probably used for heating and not as a net weight.

One half of a rectangular soapstone atlatl weight was recovered from a treefall in Machine Block 2. The atlatl weight is a broken portion of a finished artifact. It is 50 mm long, 27 mm thick, and estimated to be 80 mm wide originally. A drilled hole 14 mm in diameter was formed by the hollow cane technique (Elliott and Doyon 1981:160). The weight may be associated with the Terminal Archaic component.



One soapstone object with carved out interior and rounded exterior may be a portion of a **pipe bowl**. The fragment was found in the Terminal Archaic/Early Archaic midden in Block B.

Four soapstone **nutting stones** were found (Figure 36a). Three were found in Late Archaic features and one on the surface on the eastern edge of the site. These are rounded cobbles with smooth rounded pits or depressions on two sites. Similar artifacts are illustrated in Claflin's (1931:plate 51) Stallings Island report.

One plowzone example of a grooved or abraded soapstone cobble was recovered in Trench 5 plowzone. The cobble is unmodified except for a single groove carved across one edge.

Three cobbles show evidence of modification by a stone drill. These appear to be unfinished and discarded artifacts. Two show drilling along the long axis indicating possible atlatl or pipe manufacturing. The third is badly fragmented but is drilled on a central surface. Two were found in hearths.

Overall, there are distinct patterns of distribution of soapstone artifacts on the site. Sherds, netsinkers, the atlatl, pipe, and soapstone debris were scattered in the plowzone and midden indicating discard. Cobbles and pitted cobbles, the larger artifacts, were found predominantly in hearths (75%) indicating their secondary value as hearth stones.

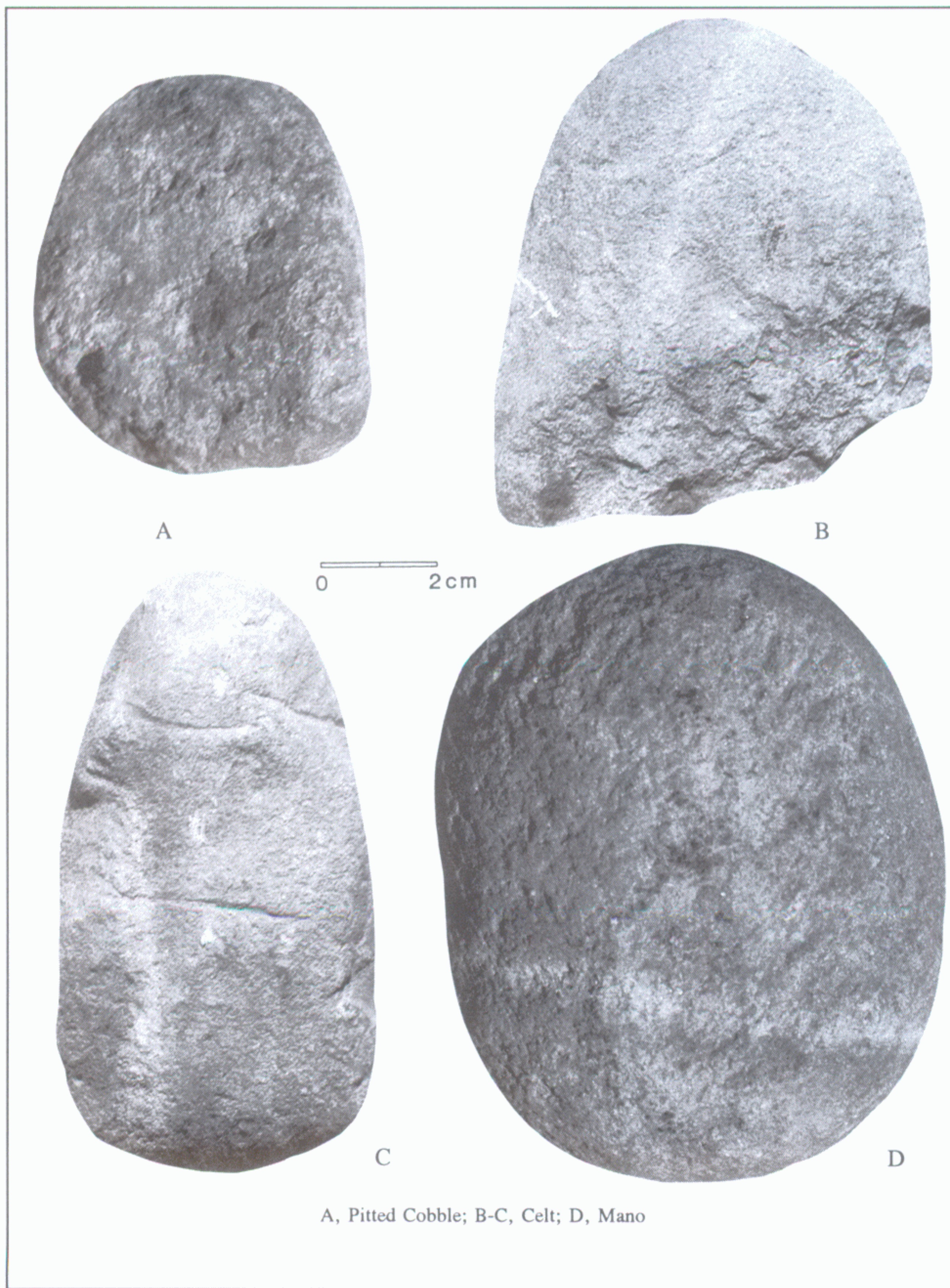
Six ground **celts** of metavolcanic material were found (Figure 36b-c). All are curated tools made from raw materials that are dissimilar to locally available stone. The two complete examples are 100 to 105 mm in length, 56 and 60 mm in maximum width, and 27 to 30 mm thick. Broken examples were probably longer. The tools have slight constrictions on the sides that seem to be hafting elements. One example was found in a Late Archaic feature, but the remainder were found in the plowzone. These tools seem to be a variation of the Late Archaic grooved axe and Woodland celt.

Fifteen quartzite **pitted cobbles** were found. The pits, usually on two sides, are generally rough and irregular, suggesting that some were used as anvil stones, and some as nutting stones. Pitted cobbles were widely distributed and appear associated with several components.

A **pitted cobble/hammerstone** is a variation of pitted cobble where battering is visible along the edges indicating multiple use. Five quartzite cobbles were found with both characteristics.

Fifteen **hammerstone** fragments were recovered. Thirteen were made from quartzite cobbles and two from quartz cores. Hammerstones were widely scattered and cannot be assigned to specific components.





A, Pitted Cobble; B-C, Celt; D, Mano

Figure 36. Examples of Groundstone Tools from 9Ri158.



Four polished cobbles with one or two flattened and polished sides were identified as manos (see Figure 36d). These tools are traditionally considered plant processing tools and are generally curated. Three of the four examples were recovered from Late Archaic contexts.

*Ochre* appeared only as small polished fragments in the Late Archaic/Early Woodland level of Block B. Ochre is considered a pigment source.

**Aboriginal Ceramics.** Eighty-six sherds were recovered from 9Ri158. This included 14 sherds recovered by Bowen (1984) and 23 sherds from a single, reconstructed vessel. Forty-six (53.5%) were plain or residual grit-tempered sherds. Plain or eroded sherds were categorized by temper. Forty-five, or 97.8%, of the plain sherds have a coarse grit temper with a high mica content. Only one sherd, found at the southeastern end of the site, is sand tempered, probably dating to the Early Woodland occupation. Decorated sherds were sorted by surface decoration. All but one of these decorated sherds were identified as Mississippian, the single sherd being Early Woodland.

One eroded, coarse *sand-tempered punctate* sherd was found in Block D. This sherd is similar to Early Woodland Thom's Creek sherds found to the southeast of the project area (Bowen 1984).

Twenty-two sherds from one vessel and four additional sherds were identified as *Lamar Complicated Stamped*. The vessel fragment (Figure 37) recovered from Feature 9 is a late Lamar jar 28 cm in diameter and 26 cm high with rectilinear stamping and a wide (20 mm), folded, pinched rim. The other sherds exhibit a similar crude stamping.

Ten sherds have the same temper as the Lamar vessel but have *unidentifiable stamped* designs. Based upon temper and quality of execution of stamping, these sherds also appear to be Lamar.

Of the *unidentified rectilinear stamped* sherds, one has a fine temper and a distinct diamond stamped design. This stamping is similar to Early Mississippian Woodstock except that the execution is poor and indistinct. This sherd was found in a tree disturbance only a few meters from the Lamar vessel. The sherd could indicate an early Mississippian component, but this cannot be demonstrated by a single sherd.

One small sherd found in Feature 12 is grit-tempered and decorated with a *fine cord impression*. Cord impressions have been noted on late Lamar sherds in Piedmont Georgia (Claflin 1931).

Only one small incised sherd was identified. The sherd has medium incised lines and appears to be late *Lamar Incised*.





Figure 37. Lamar Vessel from Feature 9.



Overall, the aboriginal ceramics fall into two groups. Two sherds of coarse sand temper are probably part of the terminal Archaic/Early Woodland Thom's Creek component. The remaining sherds are probably Mississippian or protohistoric. These later sherds may represent a single component, but the possibility of two Mississippian components cannot be discounted.

**Historic Artifacts.** A total of 591 historic artifacts were recovered. Four hundred and eighty-eight, or 82.6%, of these were recovered from shovel tests and screened trench samples. Historic artifacts were consistently recovered on all portions of the project area with nearly 80% of the 77 shovel tests producing historic material. While many artifacts are not diagnostic, many fall within two time ranges, early nineteenth century and early through mid-twentieth century.

*Kitchen group.* Eighty-three historic sherds were recovered. Both nineteenth and twentieth century ceramics exhibited a widespread distribution. Table 15 presents a breakdown of the identified ceramic types.

The historic ceramics recovered from 9Ri158 cluster into two periods. Earlier ceramics such as pearlwares and early whitewares date to approximately 1790 to 1850. Late ceramics correspond to the twentieth century component associated with the standing structures.

Two hundred and nine fragments of bottle glass were recovered from all portions of the site. The sample includes 177 clear, 14 amber, 3 aqua, 13 dark green, and 2 milk glass fragments. This material represents a broad range of nineteenth and twentieth century domestic bottle forms. However, most appear to be associated with the twentieth century farm complex.

Several other artifacts are also included in the kitchen group. These artifacts were broadly distributed over the site and were recovered primarily from shovel tests. Included in this category are 8 pieces of plastic kitchenware, one metal can opener, and one metal mason jar lid.

*Architecture group.* Artifacts included in this category were 106 nails, 56 brick fragments, 10 pieces of mortar, and 5 pieces of window glass.

Artifacts in this group, although scattered across the project area, were concentrated around the house and barn. The scatter of nails, especially wrought and cut nails, suggests that earlier structures may have once been in the project area, although this material could possibly be the result of dumping. Included in the collection were 73 wire nails, 30 square cut, and 3 hand wrought nails.

*Arms group.* This category is poorly represented. Only two examples were recovered and both are twentieth century. The category consists of one .22 caliber shell casing and one .22 caliber slug.



Table 15. Historic Ceramic Types.

Ceramic Types	Manufacturing/use span*	Total Collected
Refined Earthenware		
Creamware		
pain	1762-1820	1
Pearlware		
plain	1780-1830	6
blue-edged	1780-1830	1
blue transfer-printed	1795-1840	2
handpainted blue floral	1780-1820	3
handpainted polychrome (mocha)	1795-1815	3
Whiteware		
plain	1813-1980	41
blue-edged	1811-1845	2
blue transfer-printed	1811-1845	2
green transfer-printed	1826-1875	1
red transfer-printed	1826-1875	2
handpainted polychrome	1816-1865	2
polychrome decal transfer-printed	1901-1950	2
redware, lead-glazed	1701-1830	1
Unidentified refined earthenware	?	6
Stoneware		
Alkaline-glazed	1830-1910	2
Albany	1856-1925	1
Bristol sponge printed	1896-1940	2
Porcelain		
Plain, Chinese Export	1796-1830	1
Plain, white-bodied	1851-1915	1
Decal decorated	?	1
Total		83

\*Bartovics 1981:203; South 1977: 210-212; Burrison 1975:379

*Clothing group.* This category included one shell button, one glass button, and two brass shoe brads. All artifacts in this group are probably associated with the twentieth century occupation.

*Personal group.* The only artifact from this group was a twentieth century pocket knife.



*Activities group.* Included in this category are 2 pieces of writing slate, 1 horseshoe, 1 clothespin spring, 2 pieces of wire, 25 fragments of unidentified sheet metal, 4 metal screws, 2 pieces of wire, 41 pieces of coal, and 21 cinders or pieces of slag. Again, the artifacts in this group appear to date to the twentieth century occupation.

In summary, historic artifacts appear to date predominantly to the twentieth century and are concentrated in the area of twentieth century building construction. Nineteenth century artifacts are broadly distributed over the project area.

## **Subsistence Data**

Preservation of bone, shell, and charcoal was extremely poor in the acidic soils of the project area. The bone specimens were highly fragmented and appeared to have had prolonged exposure on the ground surface. Scattered shell was found in the plow-zone but no shell midden deposits were found. Bone in prehistoric contexts was restricted to one unidentifiable fragment from Feature 17. Historic bone was found in shovel tests near the standing structure and was associated with twentieth century artifacts. Only one specimen could be identified to species level, the tooth of a *Sus scrofa* (pig). All of the other bone specimens could be identified only to the class (mammal) or order (Artiodactyla) level. Two mammal fragments had evidence of sawing marks and one exhibited a cut mark. Appendix A tabulates the bone and shell recovered from the site.

Charcoal was uncommon in prehistoric deposits. Ethnobotanical data has been previously discussed with individual features and is tabulated in Appendix A. In short, the Archaic features and midden deposits show exploitation of predominantly hickory and, to a lesser extent, oak. Wood charcoal include oak, hickory, and pine. The Mississippian features also contained hickory nuts and acorns, but the seeds from these features strongly suggest a springtime occupation.



## ARCHIVAL INVESTIGATION

Archeological investigation of 9Ri158 produced evidence of varied historic land use and identified two periods of habitation. The first period, approximately 1790 to 1850, is dated primarily by the recovery of historic ceramics and architectural debris diagnostic of the period. Preserved structural features of this time were not found, with the possible exception of Feature 1, apparently having been destroyed by past farming and twentieth century construction activities.

The second period of habitation is identified by the standing remains of a domestic farm complex. The farm complex, with ca. 1900 buildings, was abandoned around 1970. The farmlands remained in use as pasture until 1987.

A chain of title for the project area was partially reconstructed during the historic investigation of the lands to be impacted by the proposed Augusta Canal Hydroelectric Project (Bowen and Robertson 1984). The ownership of the land immediately east of the Augusta Canal was traced from the state and municipal ownership of the twentieth century through the early nineteenth century plantation of Governor John Milledge.

### Colonial Period

The project area was a minor portion of a large tract of land granted to George Galphin in 1761 (Grant Book 3:321-323). Galphin's grant consisted of two adjacent tracts of 499 ac each. This land came to be known as "Galphin's 1000 ac" in subsequent land transactions. Only written descriptions of the boundaries of the tracts exist today. There are no extant plat maps.

Galphin's two 499 ac land grants are described as lying in the Township of Augusta in St. Paul's Parish, with one tract "bounded on the northeast by the Savannah River, southeast by lands laid out for the Trustees, northwest by land formerly allotted to Nicholas Fisher. The tract was formerly granted to Thomas Andrews." The second tract is described as: "Bounded on the northeast by the Savannah River, southeast by Thomas Andrews, southwest and northwest by land vacant. Tract was formerly allotted to Nicholas Fisher" (Hemperley 1974:63).

George Galphin's landholdings here, as elsewhere, were linked to the landholdings of John Rae. Rae acquired land adjacent to Galphin, the boundaries of which must be reconstructed in order to accurately locate Galphin's grant.

Records of Rae's property adjacent to Galphin's appear in the colonial records of 1765. Rae presented the following petition



**setting forth that he was about to erect a Grist Mill for the benefit of the inhabitants and Settlers in and about Augusta, and had found a proper Place for the Purpose. Therefore praying for two hundred Acres at Stoney Creek [Rae's Creek] three Miles above Augusta adjoining Land of George Galphin originally allotted Fisher and Andrews Indian Traders. [Candler 1904-1916, Vol. 9:267]**

In 1765, Rae received a grant of 600 ac (Grant Book E:268) "bounded on the northeast by Savannah River, southeast by William Turin and Company, northwest by George Galphin" (Hemperley 1974:154). This is the 600 ac grant that will be more fully described later in a deed to John Milledge as being located at the mouth of Rae's Creek. This identification of the location of Rae's 600 ac tract provides a firm reference point for placing the project area in Galphin's 1000 ac tract (Deed Book E:19).

Both Galphin and Rae were granted lands originally allotted to the Indian traders Nicholas Fisher and Thomas Andrews. Candler's (1904-1916) transcription of the *Colonial Records of Georgia* does not provide any record of petition or the granting of these earlier allotments. One reference, however, indicates that the land was granted but not claimed. Galphin read a petition in November, 1759, "praying for two five hundred Acre Tracts, the one originally allotted to Nicholas Fisher and other to Thomas Andrews lying a little above Augusta adjoining Land of Mr. John Rae" (Candler 1904-1916, Vol. 8:183). The petition was not granted and was postponed "until the Expiration of the Time limited by an Act of Assembly and given to absentee Claimants of Lots and Lands in this Province to come in and claim the same" (Candler 1904-1916, Vol. 8:184).

It is clear that both Galphin and Rae were claiming land in the area for which there was no clear title. One final colonial account provides further insight into the prevailing confusion of land claims during these times. A petition by John Sallis read:

**setting forth that in October 1758 he had granted him four hundred Acres of Land above Augusta, which was afterwards found to Interfere with some old Surveys of Land claimed by George Galphin therefore the Petitioner resigned all Pretentions thereto That he had sworn to the Number of his Family being a Wife and five Children Therefore praying for four hundred Acres above Augusta adjoining the upper Line of One Thousand Acres claimed by the said George Galphin. [Candler 1904-1916, Vol. 8:154]**

Apparently, Sallis failed to properly register the 400 ac and the title was never granted.

The first claimants, Andrews and Fisher, were traders. As such, neither probably intended to settle or farm the land. On the other hand, Galphin and Rae, in particular, are known to have acquired extensive landholdings that included several plantations. Galphin resided at his Silver Bluff trading post in South Carolina, but Rae apparently lived on his Rae's Creek lands as early as 1764 (Cashin 1986:85). Andrews and Fisher appear less frequently in early records, although Thomas Andrews is listed among



Augusta's earliest Indian traders in 1741 (Jones and Dutcher 1890:28). How Galphin used his 1000 ac grant of land is not known. Galphin died in 1780 (Coleman and Gurr 1983:335) but the property remained with his descendants as part of his estate until 1794 (Deed Book D:500).

Two eighteenth century maps are directly applicable to the project area. William Gerard DeBrahm's 1757 map of South Carolina and part of Georgia and Archibald Campbell's 1780 map of the Savannah River from Ebenezer to Augusta provide accurate details of early road systems, communities, and landmarks (Figure 38). The Campbell map identifies a plantation 1 mi north of Rae's Creek which is essentially the same location as the project area. The Campbell map also records two additional plantations near present-day Washington Road and identifies the area with the name "Moore's." Unfortunately, the journal prepared for the Campbell survey does not elaborate on these lands (Davis 1986).

Although Campbell's map shows a plantation on Galphin's land, there are some discrepancies. For one, the name Moore does not appear on records examined for either Galphin's or Rae's lands. Also, no evidence, in terms of diagnostic artifacts, indicate the existence of a 1780s plantation near the project area.

## Federal to Modern Period

Galphin's 1000 ac grant was purchased by John Milledge in 1794 (Deed Book D:500). Two years later, Milledge also acquired Rae's 600 ac grant (Deed Book E:19). Milledge at this time was a resident of Chatham County, Georgia. He soon moved to Augusta and developed his plantation. Milledge did not live on the plantation, but maintained a house in nearby Summerville where he resided during his terms as Governor and Senator until his death in 1818 (Jones and Dutcher 1890:224-225).

John and Martha Milledge obtained a judgment in the Superior Court of Richmond County in 1792 against the estate of George Galphin for 242 pounds and 15 shillings. That judgment resulted in the public auction of Galphin's 1000 ac tract for which Milledge was highest bidder. The property purchased by Milledge at that time included "two adjoining tracts or parcels of land containing five hundred acres each situate and lying on the Savannah River and Rae's Creek near the village of Bedford" (Deed Book D:502). The purchase also included two lots, numbers 4 and 10, in the old town of Augusta.

The 600 ac Rae tract was purchased by Milledge immediately after its purchase at public auction by Seaborn Jones. Rae's original grant tract was sold to Milledge, excluding 75 ac that was retained by Elizabeth and Izabella Rae, the daughters of John Rae. The Jones deed identified the tract as 575 ac on the Savannah River at the mouth of Rae's Creek, "being part of a tract of six hundred acres of land originally granted to John Rae Senior, which tract of six hundred acres of land is bounded northerly by Savan-



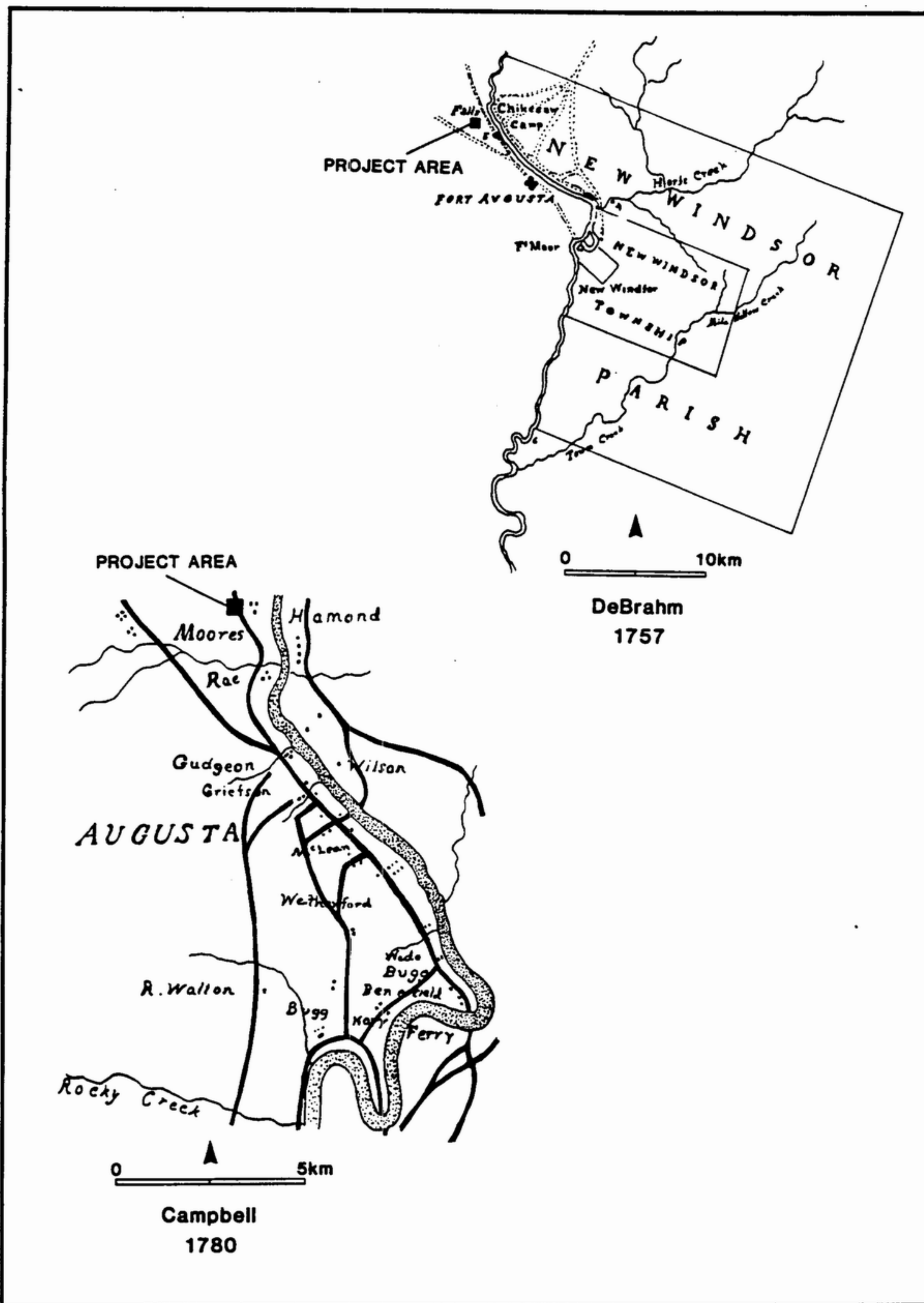


Figure 38. Portions of the DeBrahm Map of 1757 (top) and Cambell Map of 1780 (bottom) with the Location of the Project Area.



nah River, westerly by land Granted to George Galphin, esquire, Southerly by lands of Mr. Andrew Innis and Mrs. Farris, and easterly by part of the white house tract of land belonging to Doctor Montgomery and Mrs. Ezekiel Harris" (Deed Book E:19).

The landholdings of Milledge remained essentially unchanged until his death. The 1807 tax digest lists his holdings as 1100 ac above and 400 ac below Rae's Creek. Milledge also owned land in Chatham and Burke Counties. He owned a total of 110 slaves. At the time of his death in 1818, Milledge owned a 1600 ac plantation in Richmond County, 52 ac in Summerville, 500 ac in Chatham County, 400 ac in Burke County, and 115 slaves (Richmond County Tax Digest 1818).

The early nineteenth century historic artifacts recovered from 9Ri158 are associated with structures that date to the period of time when Milledge's plantation was active. Since Milledge did not live on the plantation, the recovered domestic material could represent the remains of slave or possibly overseer houses. The houses may be the same structures mentioned in the will of John Milledge in 1818. Milledge instructed his stepson Galphin Milledge to care for his plantation including "the Negroe houses, and overseer houses and the buildings near them, adjoining Mr. Colemans" (Richmond County Will Book 2:154-155).

Since the project area lies at the northwestern edge of Milledge's plantation (Figure 39) and adjacent to Coleman's land, there is the possibility that the buildings referred to are in or near the project area. There is, of course, an equally strong possibility that the buildings were close to Washington Road. Regretfully, the Milledge will is the only early nineteenth century reference encountered that noted structures of any kind.

Four years later, in 1822, the Milledge estate was partitioned and 649.25 ac (including the project area) were sold to Lindsey Coleman (Deed Book 3:30-31). The plat prepared for that transaction provides the first accurate representation of the plantation boundaries. Plats were also prepared for the remainder of the Milledge estate when it was sold in 1843 (Deed Book AA:419-420; Deed Book QQ:389-390). The three plats are here combined to present a composite view of the Milledge plantation (Figure 39). The boundaries of the two northern tracts of 649.25 ac and 318 ac are the boundaries of Galphin's original 1000 ac grant. The remaining tract represents the northern portion of Rae's original 600 ac grant. The two 1843 plats show detailed land use patterns, but neither the 1843 nor the earlier 1822 plat illustrate structure locations. Rural houses had little value at this time and were not generally shown on plats.

The 1822 deed also discusses the disposition of the fisheries on the Savannah River. The deed assigns the upper fishery to the 649.25 ac tract of Coleman and retains the lower fishery adjacent to the remaining Milledge land for the heirs of John Milledge (Deed Book S:30). The control of the fisheries along the shoals of the Savannah represented a significant source of income and was contested throughout part of the eighteenth and mid-nineteenth centuries. An 1833 deed consolidated control of the adjacent fisheries when James Coleman, heir to the Lindsey Coleman estate, purchased the Savannah River fisheries from the Hammond family of Edgefield County, South







Carolina. The fisheries purchased by Coleman included Greens Shoal, Thompson Hile Shoal, and "the shoal just opposite the Coleman's farm shoals" (Deed Book W:136-137).

Lindsey Coleman retained ownership of the project area for only three years. The Coleman chain of title was not completed due to a gap in records during the late eighteenth century. Lindsey Coleman acquired 1058 ac in 1811 from the estate of former mayor of Augusta, John Catlett. Catlett's estate included 446 ac known as the Bedford tract, 400 ac above the village of Bedford known as the Dysart plantation tract, and an adjoining 212 ac of pine lands (Deed Book M:58-59). This is the same property shown as the "Estate of L. Coleman" on the 1822 plat (see Figure 39). The original acquisition of Catlett's property immediately adjacent to the project area was not traced, but the 1800 Richmond County tax digest states that Catlett owned, among other tracts, 250 ac on the Savannah River adjacent to the Milledge property and originally granted to Galphin. Apparently at least one of Galphin's several grants, described only as being in St. Paul's Parish, was actually adjacent to his 1000 ac tract (Hemperley 1974:62-65).

Reference to the town of Bedford appears consistently in late eighteenth and nineteenth century deeds in the area. Bedford is a little known, planned town that was purchased by Lindsey Coleman in 1817 (Deed Book S:281). William Few, the executor for the estate of Ignatius Few, sold Coleman "in the County of Richmond in what was formerly the Town of Bedford known on the plan of said Town as Lot numbers, one, two, three and four and also a lot in said Town the number not known" (Deed Book S:281). At least in the eyes of Few, the Town of Bedford was quite dead in 1817. The place name continued to be used for the remainder of the century, in part as a reference to a plantation, and later for a small, rural community.

Coleman's 649.25 ac tract was sold to M.W. Warren in 1825 (Deed Book S:493) and immediately transferred to Benjamin H. Warren (Deed Book S:493-494). Warren sold and repurchased the tract during the next decade. By 1840 the tract was the center of Warren's extensive plantation which remained intact for the remainder of the nineteenth century.

Benjamin H. Warren was an influential Augusta businessman with strong ties to the commercial and industrial section of Augusta. The 1841 City Directory lists Warren's occupation as president of the Railroad Bank (Woodward 1841). Warren retained interest in both railroads and textile factories until his death in 1870 (Jones and Dutcher 1890). The 1850 Richmond County Tax Digest lists his landholdings as 971 and 104 ac, with three town lots, 85 slaves, and 11 road hands worth a total of \$11,150. The 1860 U.S. Census lists the value of Warren's real estate at \$135,000 and personal property at \$86,000. Warren's wealth did not suffer during the Civil War. He retained his large landholdings and later distributed substantial amounts of cash to his heirs (Richmond County Will Book D:73-74).



Warren was a strong supporter of the Augusta Canal project. Warren and neighbor Henry H. Cumming were responsible for the excavation of a major portion of the long first level of the canal (Cashin 1980:94-95). The engineer's report printed in the May 8, 1845, edition of the *Augusta Daily Chronicle and Sentinel* notes "sections 6 and 7 were undertaken by Judge Warren and are decidedly the heaviest work in proportion to length of any part of the line. Warren advertised for purchase of 20 negroes to join his." Warren allowed a right-of-way for the canal through his property for only one dollar, as shown in a March 12, 1845 transaction with the City of Augusta and Augusta Canal Company (Deed Book KKK:380-381). The right-of-way included both the canal channel and a tow path across Warrens' Bedford plantation.

The location of the original Augusta Canal is shown on an 1862 plat of Warren's estate (Deed Book QQ:488-490). The 1862 plat (Figure 40) shows a transfer of 200 ac between the canal and the river to the Confederate States of America for the construction of powder magazines and buffer zones. The nearest magazine was constructed well to the south of the project area (Bowen and Robertson 1984). The enlarged Augusta Canal is also illustrated in Figure 40. The enlarged canal was apparently contested by the heirs of Benjamin H. Warren, as noted in the 1874 deed which discusses several years of court proceedings (Deed Book DDD:225-226). The Superior Court judgment required that the Augusta Canal Company pay \$2594 for land damaged by construction. The canal company was also instructed to purchase about 100 ac of the Hilton Place which had been cut off by the canal from the Warren property. The enlarged, machine-excavated canal was obviously destructive of the surrounding land and clearly disturbed the archeological deposits on 9Ri158.

The Warren landholdings remained intact for nearly 20 years after his death. The plantation continued to be operated under the direction of his administrators Lindsey G. Warren and, later, John M. Walker. With respect to archeological deposits, the most significant event during this period was the construction of the Augusta and Knoxville Railroad. In 1879 a right-of-way across the Warren land was purchased for \$300 by the Augusta and Knoxville Railroad (Deed Book VVV:345). A few years later, in 1906, the subsequent owners of the property, the Alexander family, were awarded \$2000 in damages from the then defunct railroad for various damages to the land which apparently included frequent forest fires caused by sparks from the engines (Deed Book 6-0:208-211).

The Benjamin H. Warren tract was sold to James H. Alexander in 1887. Alexander was a wealthy Augusta businessman who acquired substantial land holdings in the area during the 1880s. Alexander was also a politician and was elected as the Augusta mayor in 1891 (Cashin 1980).

The 1887 plat reproduced in Figure 41 is extremely detailed, showing structures on the property, boundary lines and landmarks. Three plantation complexes are shown: Warren's plantation, Bedford, and the Hilton Place. No structures are shown in the project area, but a small shanty town was located nearby in the railroad right-of-way.



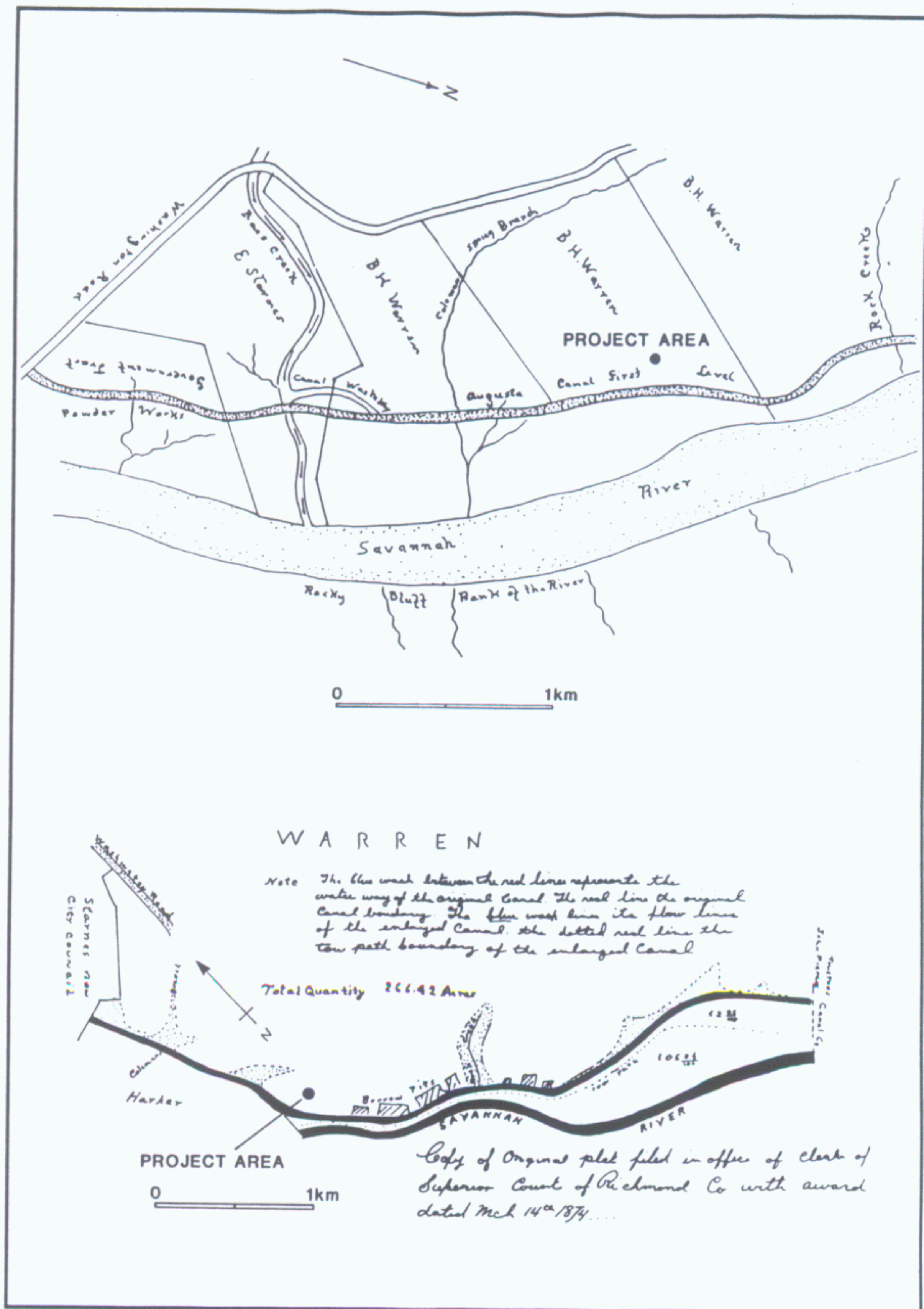
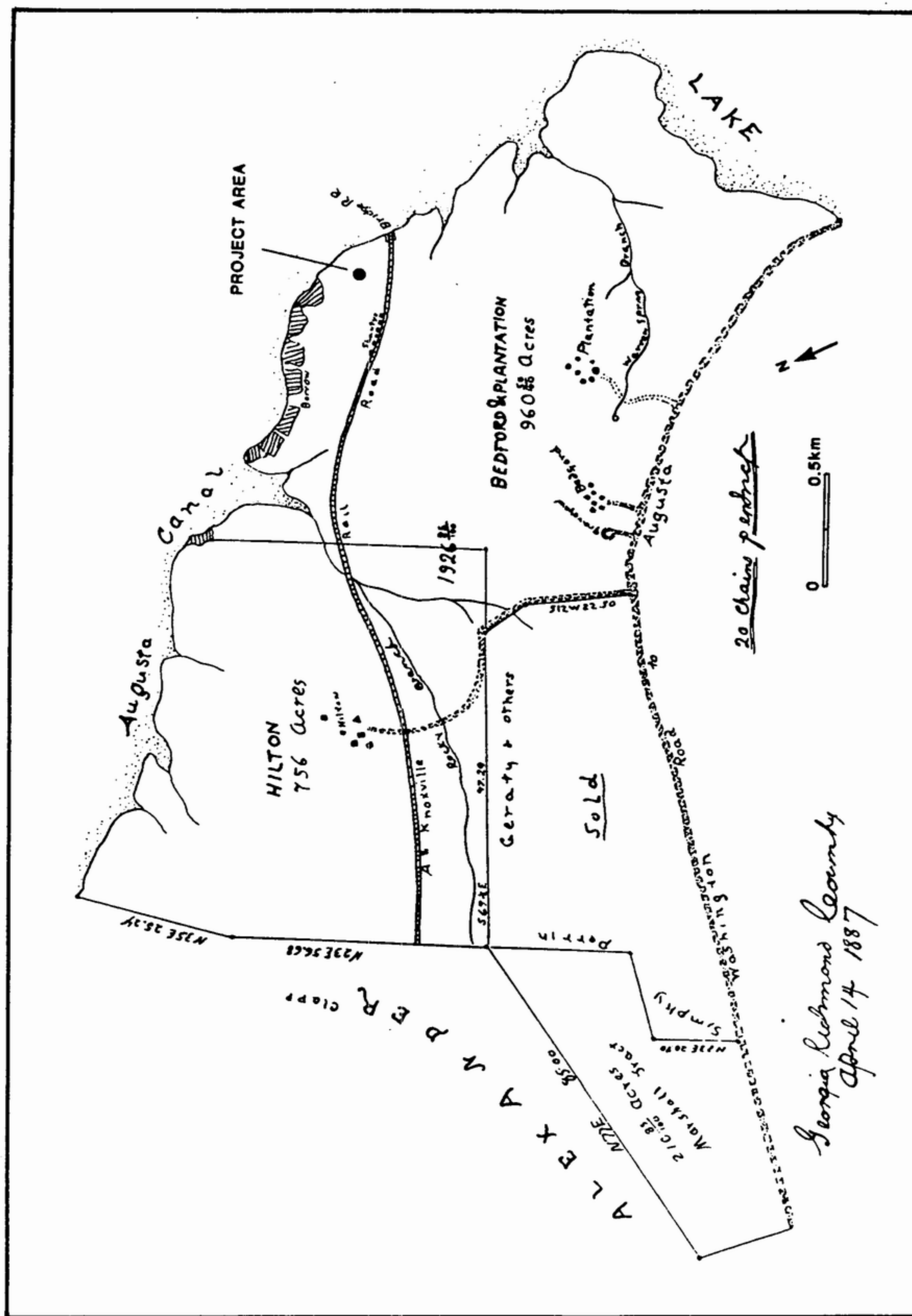


Figure 40. Plats Showing the Augusta Canal as Originally Constructed (top) and After Enlargement (bottom).







The major portion of the Warren lands remained intact until Alexander's death in 1904. Alexander's estate was willed to his wife Sarah and sons Irwin and H.H. Alexander in 1904 (Will Book I:134). During the next two decades, the Warren lands were subdivided, with Irwin and H.H. Alexander only retaining small lots near Washington Road. During the early 1920s the property was sold as lots under the corporate title of Warren Heights (Deed Book 9S:515-517).

The fate of the project area during the twentieth century was determined by the Augusta City Council. Construction of the new city waterworks in 1899 just across the canal resulted in construction in the project area. In 1900 James H. Alexander sold roughly 9 ac of land to the city "for building houses on for the use of the employees at the city of Augusta new pumping station" (Deed Book 5U:191). The house and barn on 9Ri158 was part of this construction. The remainder of the project area was purchased by the city in 1913 from the Alexander heirs (Deed Book 7T:58-59). A plat of the property (Figure 42) shows two structures constructed that correspond to the present location of the house and barn. The 80 ac purchased at that time was to be used

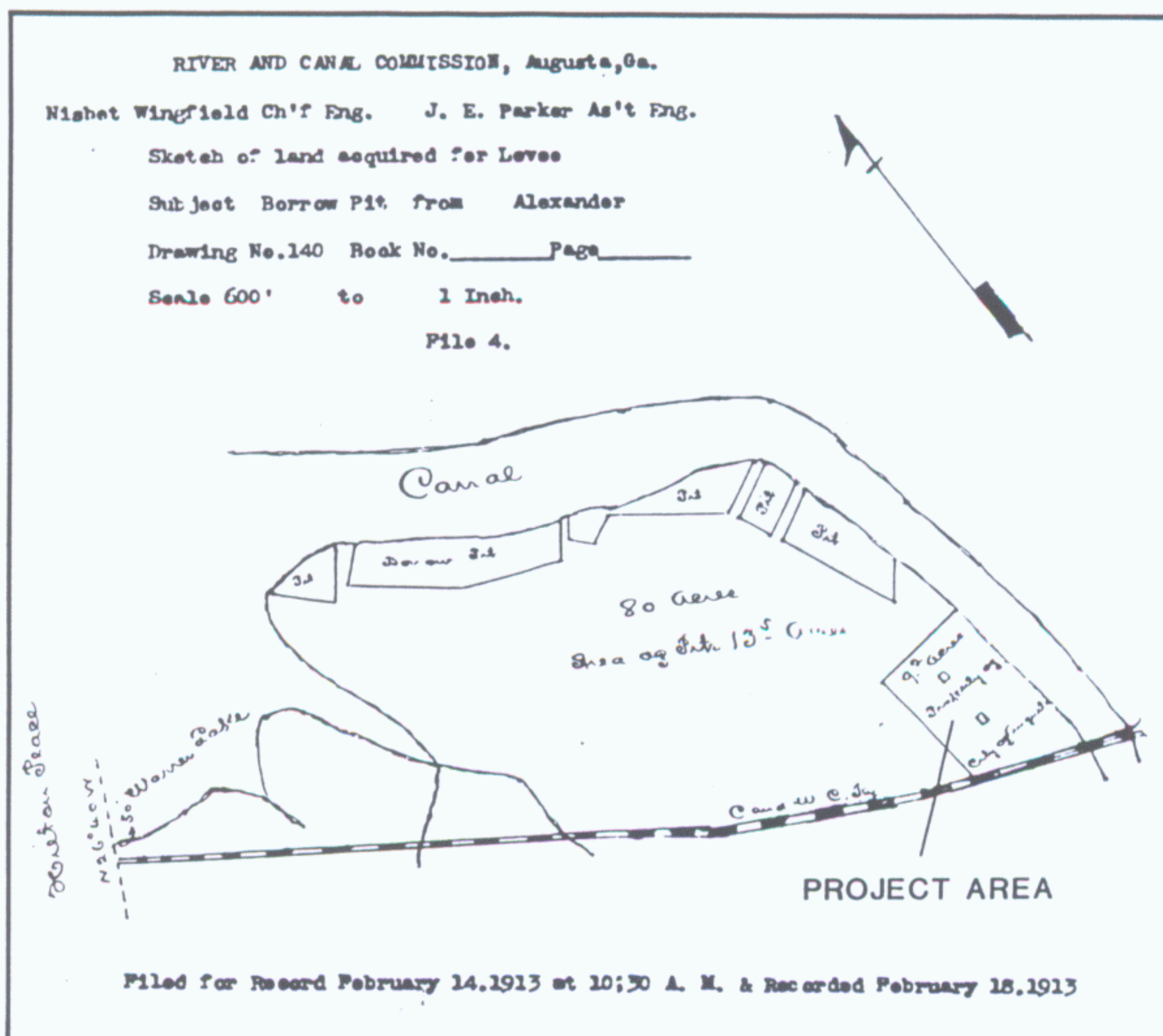


Figure 42. A 1913 Plat Showing the Project Area. The two structures shown in the 9.2 ac block represent the house and barn.



as a borrow pit, providing fill for the Augusta levee. The deed states that the Alexanders "may use so much thereof for agricultural purposes during the year 1913 as may not be used by the party of the second part [the city] for securing dirt" (Deed Book 7T:58-59).

The city maintained the house for approximately 50 years before leasing it and the surrounding farmlands. The land, according to several sources (Lewis Trout, H.H. Hall, personal communication), was used at one time as a prison work farm. The 1935 map of Augusta shows the adjacent area as a city stockade. The house was apparently occupied until approximately 1970, and Mr. Joe Gedding was the last resident. Afterwards, the property was used solely for livestock husbandry, providing DOT archeologist Rowe Bowen the inspiration for the name "the Pig Pen site."



## SUMMARY AND DISCUSSION

This chapter summarizes the results of the archeological investigation of 9Ri158 in terms of site structure and component information. This data is then placed within the context of present knowledge of the greater site area and the regional settlement patterns near the Fall Line of the Savannah River. Data recovery at 9Ri158 focused on the investigation of a project area of approximately 18,700 m<sup>2</sup> defined by the boundaries of a proposed highway corridor. Based upon previous archeological survey and collector interviews, the project area is apparently part of a continuous prehistoric artifact scatter that may have originally extended for 2.2 km along a ridge that forms a bluff overlooking the Savannah River.

9Ri158 is located on a bluff approximately 15 m above the Savannah River in an area locally known as "the Falls." The site is situated near the lower edge of the Piedmont in an environmentally diverse area. The site's location allows access to both Piedmont and Fall Line Hills upland habitats, as well as the aquatic resources of the adjacent river shoals and tributary floodplains. Several early historic trails or "trading paths" converge near the site (Goff 1953:331).

The site's prehistoric deposits have been altered by two centuries of intensive plowing and several episodes of construction. Excavation and subsequent enlargement of the Augusta Canal and construction of the Augusta Pumping Station during the nineteenth century damaged the eastern portion of the site. A portion of the site was altered by railroad construction during the late nineteenth century, while much of the northern portion of the site was removed for fill dirt during the early twentieth century construction of the Augusta levee. Twentieth century borrowing continued with the construction of Eisenhower Park to the north and topsoil stripping from the greater site area (9Ri(DOT)25) to the east of the canal. Considering the extent of destruction, the survival of any portion of the site is remarkable.

Most of the project area contained a mixed cultural deposit restricted to the plowzone. Time periods recognized in the plowzone material included Paleoindian, Early, Middle, and Late Archaic, Early Woodland, Late Mississippian, and Euro-American. However, small pockets of midden were preserved along the eastern project boundary. This preserved deposit, with a maximum thickness of 20 cm, contained Archaic lithics, stone hearths, and intrusive Lamar pits. Unfortunately, the acidic soil of the midden zone contained little preserved faunal or botanical remains.

If the surviving midden deposits can be used to characterize the remainder of the project area, the site was an area of repeated, but generally nonintensive, use during most of the Paleoindian/Archaic time periods. These early activity areas were apparently widely scattered, as evidenced by the accumulation of small quantities of lithic material. The Late Archaic/Early Woodland period was the time of greater intensity



of occupation resulting in the deposition of the bulk of the material in the midden. Mississippian and historic utilization of the site is reflected in intrusive features, extensive plowzone artifact scatters, and, for the most recent inhabitants, standing structural remains.

Diagnostic artifacts indicate that the site was thinly occupied from the Paleoindian until the Late Archaic periods (approximately 10,000 to 3000 B.C.). Relatively few diagnostic artifacts for these periods were recovered. However, this sparseness may be partially a function of collector activity. No features were identified with these early components and few formal tools, other than bifaces, were found, indicating a low diversity of activities.

While the greater site area was occupied throughout the Late Archaic period, the project area was most intensely occupied during the transitional period encompassing the latter part of the Late Archaic and the beginning of the Early Woodland, sometimes referred to as the Terminal Archaic. Projectile points made primarily from quartz and chert show great diversity in form but share general similarities to types such as Otarre, Flint Creek, and Gary. These point types are generally grouped into a single, "Late Archaic stemmed" type.

Significantly, the Late Archaic tool assemblage at 9Ri158 is not dominated by projectile points. The tool diversity is relatively high and indicates a broader range of activities that, in turn, indicates a greater intensity of occupation. The presence of features also is an indicator of greater intensity of occupation. Other artifacts identified with this component include a variety of soapstone artifacts, ground stone tools, flake tools, and Thoms Creek ceramics. The near absence of Late Archaic/Early Woodland ceramics in the project area (two Thoms Creek sherds and no fiber-tempered ceramics) is considered a factor of intra-site variability in site function, since these artifacts have been recovered from deposits representing the same components from the greater site area to the east of the canal (Bowen and Robertson 1984).

The Late Archaic/Early Woodland occupation is best reflected in the midden deposits where hearths and lithic concentrations were identified. Identified activities are diverse and include biface and soapstone tool manufacturing, butchering, and plant processing. No structural features were identified, which suggests that the project area is located at the periphery of the habitation area. Subsistence remains limited to hickory nuts, acorns, and mussel shell were extremely sparse due to poor preservation. Mussel shells, although widely distributed, occurred as small, badly decomposed fragments within the plowzone and midden.

There was no indication that the project area was occupied for the remainder of the Woodland and the early part of the Mississippian periods. However, several features were found that date to the Late Mississippian period. A Lamar component was identified by a widely dispersed ceramic scatter covering approximately 0.5 ha (see Figure 13). Lamar features were found in two of the three machine-excavated blocks but were most common at the eastern edge of Machine Block 3. Features consisted of medium and large pits containing a midden-like fill with a few Lamar sherds and incidental Ar-



chaic material. There were no postmolds identified in the area of the Lamar features. Subsistence evidence, although minimal, included seeds and nuts from both spring and fall fruiting plants. Overall, the Lamar material suggests a specialized site rather than a habitation site.

The project area contained evidence of two periods of historic habitation. The primary evidence of an early nineteenth century occupation consisted of historic ceramics, mostly pearlwares and early decorated whitewares, and architectural debris, primarily hand wrought and cut nails. There were no features found that conclusively dated to this period. The second period of historic construction dates from ca. 1900. An abandoned and rapidly deteriorating farm house, and the foundations of additional structures including a barn, animal stalls and pens, are readily visible twentieth century features.

In summary, the project area contained evidence of extended aboriginal use dominated by the Late Archaic, the transitional Late Archaic/Early Woodland, and Lamar occupations. The project area also produced evidence for historic utilization during the first half of the nineteenth and most of the twentieth century.

## The Greater Site Area

The project area is separated from the remainder of the greater site area by the Augusta Canal. Although the greater site area extends both north and south of the project area, the area to the southeast, which extends along the Savannah River to Warrens Spring Branch, has been the subject of both recent archeological investigation (Bowen 1984; Bowen and Robertson 1984) and intensive relic collecting. The data from previous investigation provides an opportunity to inspect a substantially larger portion of the site and thus allow a more realistic basis for site interpretation.

The large field to the southeast of the canal has been recorded as three separate sites. This separation was necessary, in part, because railroad construction had destroyed all archeological evidence within its path. Designation of arbitrary site boundaries in this case is important for defining specific components and the area of highest artifact density (e.g., the extent of the shell midden defined as 9Ri(DOT)27). However, the artificial nature of the separation is apparent when the locations of the sites are illustrated (see Figure 4).

Bowen's largest site, 9Ri(DOT)25, covering most of the field, is bounded by the canal, railroad tracts, and a tributary stream (Warrens Spring Branch). The area has been badly disturbed but Late Archaic, Mississippian, and nineteenth century historic components were identified (Bowen 1984). Recovered aboriginal ceramics included fiber-tempered and a few sand-tempered brushed and complicated stamped. Bowen's second site, 9Ri(DOT)27, (Claflin's [1931:41] Site 8), was a shell midden covering approximately 0.2 ha. Testing of the site produced intact and abundant subsurface features containing bone and charred seeds (Bowen and Robertson 1984). Claflin (1931) simply reported that the site contained a visible shell deposit. Ceramics recovered by



Bowen included fiber-tempered and Early Woodland Thom's Creek punctate sherds (Bowen and Robertson 1984). The third site area, 9Ri(DOT)28, was a non-shell Late Archaic site with fiber-tempered pottery and preserved subsurface features (Bowen and Robertson 1984).

Bowen's (1984) and Bowen and Robertson's (1984) research is critical for showing the expansive nature of the Terminal Archaic/Early Woodland artifact scatter in the area of 9Ri158. The two sites adjacent to the river (9Ri(DOT)27 and 9Ri(DOT)28) provide evidence of possible sedentism as demonstrated by the presence of midden deposits, pits with abundant subsistence remains, and pottery.

A second source of data for the greater site area was found in private artifact collections. The collections of Augusta residents Lewis and Sylvia Trout and Don Lewis include surface material from the entire site area east of the canal and south of the pumping station. These avocational archeologists had labeled each point with a site and field specimen number, allowing certainty of provenience. However, these are only two of the more recent collections made by numerous people in a favorite collecting area. The Trout and Lewis collections may be biased towards material which earlier collectors chose not to collect. Likewise, the collections are biased towards projectile points. Other than projectile points, the collections contained a small number of Thoms Creek sherds, six crude soapstone perforated slabs (probable heating stones), a single atlatl weight, and a single Edgefield scraper. Table 16 is a list of all complete bifaces and basal fragments in the two collections. A representative sample from the collections is illustrated in Figures 43 and 44.

The Early and Middle Archaic projectile points in these collections represent a small proportion of the total count of projectile points. Limited Early and Middle Archaic occupation similar to that of the project area could account for this. Likewise, the few Woodland and Mississippian points in the collections is consistent with the small amount of later Woodland and Mississippian pottery reported by Bowen (1984) and Bowen and Robertson (1984).

The large proportion of Late Archaic points (69%) in the collections demonstrates a greater intensity of occupation. The high proportion of metavolcanics (61%) in Late Archaic points, however, differs from the greater proportion of quartz and chert points found in the project area excavations. Of Late Archaic points from the project area, only 21% are metavolcanic. The high proportion of metavolcanics and the predominance of square-stemmed points in the private collection indicates a significant Late Archaic Savannah River or Stallings Island phase component. This is the best evidence that the site was occupied for much of the Late Archaic as well as the transitional Late Archaic/Early Woodland.

Furthermore, many of the large ovate bifaces are probably associated with the major Late Archaic component. The large number of Late Archaic drills in the Trout/Lewis collections show a sharp contrast with the single example recovered in the project area. These drills may represent evidence of manufacturing (perhaps perforated soapstone slabs).



**Table 16. Bifaces in the Trout/Lewis Collection .**

<b>Paleoindian/Early Archaic</b>	
Quartz Dalton	1
Quartz Big Sandy	1
Chert Big Sandy	2
Quartz Kirk Corner Notched	3
Chert Kirk Corner Notched	6
Metavolcanic Kirk Corner Notched	1
<i>Total</i>	<i>14</i>
<i>Percentage</i>	<i>9.5%</i>
<b>Middle Archaic</b>	
Quartz Morrow Mountain	8
Chert Morrow Mountain	3
Quartz Middle Archaic Stemmed	4
Quartz Guilford	1
Chert Guilford	3
Chert Benton variants	3
Metavolcanic Benton variants	1
<i>Total</i>	<i>23</i>
<i>Percentage</i>	<i>15.5%</i>
<b>Late Archaic Stemmed</b>	
Quartz Late Archaic Stemmed	26
Chert Late Archaic Stemmed	14
Metavolcanic Late Archaic Stemmed	62
<i>Total</i>	<i>102</i>
<i>Percentage</i>	<i>68.9%</i>
<b>Woodland/Mississippian</b>	
Quartz Yadkin	1
Chert Yadkin	2
Chert Jacks Reef Corner Notched	1
Quartz Hamilton	2
Chert Hamilton	3
<i>Total</i>	<i>9</i>
<i>Percentage</i>	<i>6.1%</i>
<i>Total diagnostic PP/Ks</i>	<i>148</i>
<i>Nondiagnostic ovate bifaces</i>	<i>56</i>
Quartz	40
Chert	7
Metavolcanic	9
<i>Drills</i>	<i>39</i>
Quartz	7
Chert	16
Metavolcanic	16
<b>TOTAL BIFACES</b>	<b>243</b>



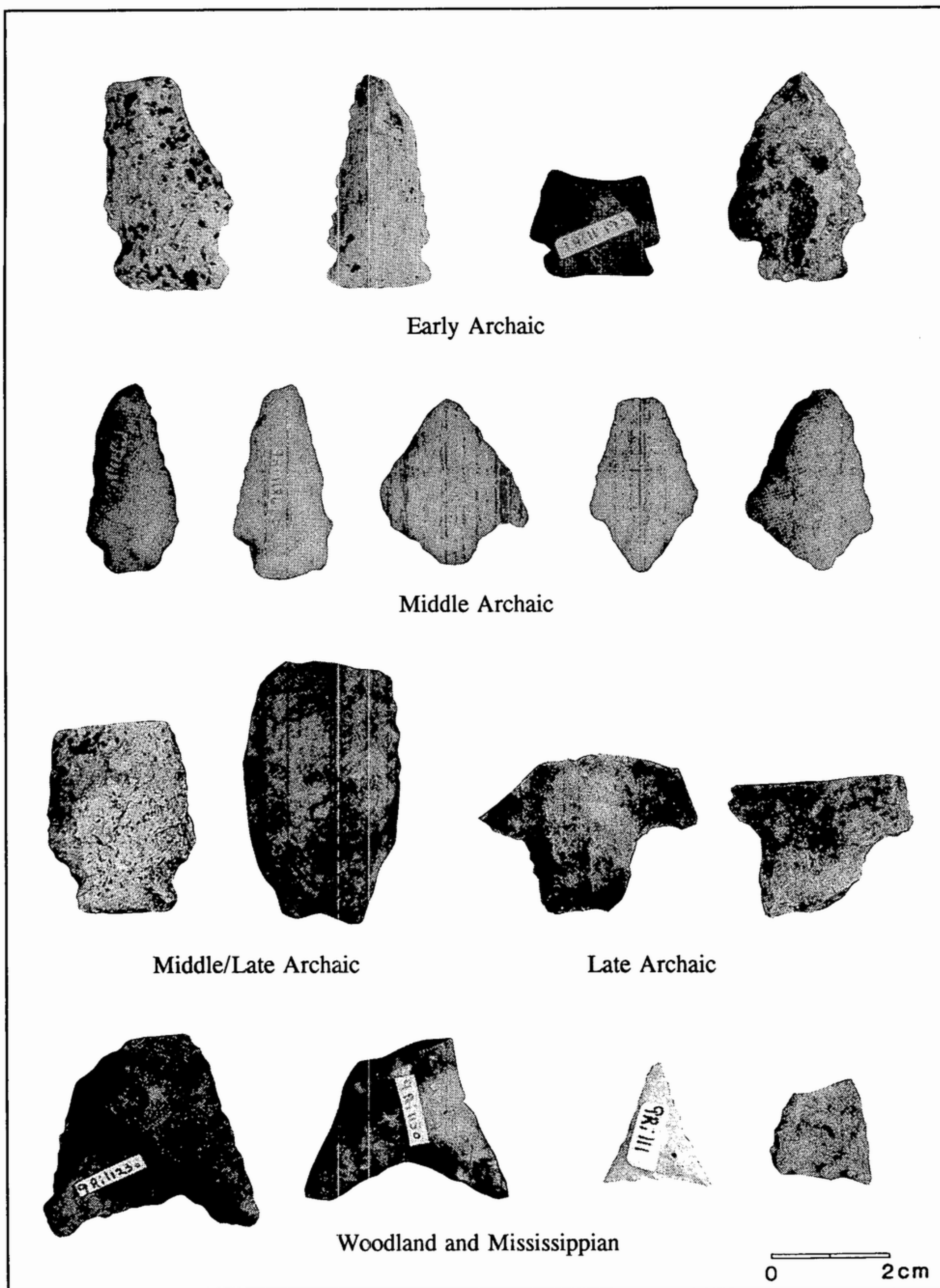


Figure 43. Examples of Projectile Point/Knives from the Trout/Lewis Collections.





Figure 44. Metavolcanic Savannah River Points from the Trout/Lewis Collection.



By combining the project area with Bowen's three sites, we are examining a site area approximately 1 km long and as much as 200 m wide. Within that large area, archaeological investigation has provided evidence for a continuous artifact distribution that is identified primarily with Late Archaic or transitional Late Archaic/Early Woodland occupations. Intra-site patterning within this large area is most visible when the shell midden deposit of site 9Ri(DOT)27 and the varied features of both 9Ri(DOT)27 and 9Ri(DOT)28 are contrasted with the project area where the midden contains little shell and low feature diversity (rock hearths). Late Archaic artifact patterning with the classes such as ceramics, drills, and projectile points also appear to show significant intra-site variability.

### **Components in a Regional Perspective**

9Ri158 can now be placed with greater confidence within a regional perspective. The Late Archaic/Early Woodland occupation is of primary importance since the data suggest the greatest intensity of occupation during this time; however, the data recovered for the remaining components is also of interpretive value with respect to settlement near the Fall Line of the Savannah River.

**The Paleoindian Period.** The recovery of Paleoindian and transitional Paleoindian/Early Archaic projectile points is consistent with previous survey data for this portion of the Savannah River. Recent surveys of Paleoindian points in South Carolina and Georgia (Charles 1986; Anderson et al. 1987) identify higher concentrations of Paleoindian points for the counties adjacent to the Fall Line along the Savannah River. This higher density may be associated with raw material outcrops of Coastal Plain chert in Allendale County, South Carolina, and Burke County, Georgia, and metavolcanics near Clarks Hill Lake in the Piedmont.

With the exception of the Taylor Hill site in Richmond County (Elliott and Doyon 1981), and 38Al143 in Allendale County (Goodyear and Charles 1984), excavated Paleoindian data from the Savannah River consists of little more than isolated points mixed with Early Archaic deposits (Brockington 1971; Anderson and Schuldenrein 1983; Wood et al. 1986). Sites such as 38Al143 (Goodyear and Charles 1984:55) and the Theriault site (Brockington 1971) are quarry workshops located adjacent to Coastal Plain chert deposits. Limited testing at the Taylor Hill site (Elliott and Doyon 1981) produced several points, potentially indicating an area of more intensive occupation than found elsewhere along the Savannah River.

Recent Paleoindian research in Piedmont Georgia using data from 91 sites from the Oconee River Valley, grouped sites into intensively occupied base camps, smaller quarry-related sites, and small, limited-activity camp sites (O'Steen et al. 1987). The recovery of one Clovis, one untyped lanceolate, and three Dalton points from 9Ri158 and the greater site area and the absence of Paleoindian formal unifaces is consistent with a characterization of a site composed of scattered, limited-activity camps sporadically visited over a period of 2000 to 3000 years. Raw materials are primarily of Piedmont or Fall Line origin as shown by three quartz, one metavolcanic, and one Coastal



Plain example. The location of 9Ri158 was an excellent vantage point for a large portion of the adjacent shoals. The shoals attracted both aquatic and terrestrial species to the area. The data suggests that the site was an area where individuals or small groups conducted brief hunting and gathering forays.

**The Early Archaic Period.** In terms of diagnostic projectile points, Early Archaic Kirk Corner Notched was second in number only to Late Archaic stemmed. This point category had moderate diversity in style and contained examples that might be classified as both Palmer and Kirk Corner Notched, as originally defined by Coe (1964). The private collections contained a few side-notched Big Sandy/Taylor points but no bifurcate or Early Archaic stemmed points.

Early Archaic points were identified in nearly equal numbers in both the project area and the large field to the southeast. The points were widely distributed, lacking concentrations to identify any specific portion of the site area as a focus of activity. The points were manufactured primarily from chert (70%), indicating minimal tool replacement from locally available quartz. Expedient tools often equated with early occupation (gravers, burins, *pieces esquillees*) were uncommon, while formal tools other than bifaces were virtually absent.

9Ri158 was probably used as a short term, logistical camp site regularly visited during the first half of the Early Archaic period (as identified by Kirk points). Very possibly, the use of the site was unchanged from preceding Paleoindian times. The bluff, as an excellent vantage point for the shoals, would have been an advantageous location for both Paleoindians and Early Archaic people. The high proportion of Coastal Plain chert, a non-local raw material, could indicate both mobility (Anderson and Hanson 1985) and the transitory nature of occupation (O'Steen et al. 1987). The low artifact density is further evidence of the impermanence of occupation. The absence of points identifying the transitional period between Early and Middle Archaic (LeCroy, Kirk stemmed, Stanly) indicates that the site area was minimally utilized for approximately 1000 years prior to the more intensive settlement of Morrow Mountain.

**The Middle Archaic Period.** Overall, the number of Middle Archaic points identified is greater than the preceding Early Archaic. The number of points, however, must be divided between four types, while the earlier period was dominated by one type--Kirk Corner Notched.

The sample of Middle Archaic points from 9Ri158 shows differences in raw material use that correspond to early and late portions of the period. Early Middle Archaic, consisting of Morrow Mountain and the Morrow Mountain variant termed Middle Archaic stemmed, are represented by 25 quartz, 1 metavolcanic, and 3 chert examples, or 90% Piedmont/Fall Line resources versus 10% Coastal Plain. Late Middle Archaic, consisting of Guilford and Benton variants are represented by 4 quartz, 1 metavolcanic, and 8 chert examples, meaning that 62% of the points are made from Coastal Plain materials.



If the small activity areas identified in Block A and inferred from Block C are indeed Middle Archaic, as the associated artifacts suggest, the occupation of 9Ri158 seems unchanged from the preceding periods. The Block A material consists of heavily resharpened and curated tools. This would suggest that the early Middle Archaic material from 9Ri158 was also the result of short-term, logistical camps. The Guilford and Benton occupation areas were not identified in the midden areas, which restricts interpretation. The high proportion of non-local raw materials represented by identified points, however, suggests a transitory use of the site area by people with strong ties to the Coastal Plain.

**The Late Archaic and Transitional Late Archaic/Early Woodland Periods.** The greater site area was occupied throughout much of the Late Archaic period and the initial part of the Early Woodland period as identified by Savannah River, Stallings Island, and Thoms Creek phase artifacts. The intensity of occupation at any one time is not clear, but the diversity of tools indicates intensive and probably sedentary occupation during portions of this period.

Evidence of preceramic Savannah River phase or ceramic period Stallings Island phase occupation is represented by broad, square-stemmed points manufactured primarily from metavolcanics. A few of these points were found in the project area, but most of the points fitting this description were found in private collections from the field southeast of the project area. Thick, oval soapstone slabs and numerous drills were also collected in the same area. Bowen and Robertson's (1984) testing of 9Ri(DOT)27 failed to demonstrate that these surface artifacts are directly related to the shell midden, but it appears that both are manifestations of Savannah River and Stallings Island phase occupations. This occupation appears to be focused close to the river, east of 9Ri158.

There were no stratigraphic or spatial distinctions discernible between the ceramic phases Stallings Island and Thoms Creek in the excavated data from the project area. The two are here combined for discussion as a Late Archaic/Early Woodland component. As previously discussed, most of the points from the project area are types that date to the ceramic period (Gary, Flint Creek, Otarre), but ceramics were virtually absent. This discrepancy must be a function of intra-site patterning within the greater site area, since Bowen and Robertson's (1984) excavations to the southeast produced both fiber-tempered and sand-tempered pottery in association with these same points. This same point/sherd association has been demonstrated at 9Ri86 (Elliott and Doyon 1981) which is almost exclusively Late Archaic/Early Woodland.

Bowen and Robertson (1984) found Stallings Island and Thoms Creek ceramics in features associated with the shell midden at 9Ri(DOT)27. The large numbers of features and abundant subsistence data suggests the possibility of intensively utilized habitation areas on 9Ri(DOT)27 and 9Ri(DOT)28. The project area, on the other hand, produced no clear evidence of structures, only hearths.



The intensity of Late Archaic/Early Woodland occupation in the project area is difficult to firmly assess, but the evidence suggests a high diversity of activities. Subsistence evidence is rare, but mussel shell is sparsely scattered the length of the project area. There is no preserved bone and the few preserved nut fragments are the expected hickory nuts and acorns. Soapstone has a distribution similar to mussel shell, basically the length of the midden. Diversity of soapstone artifact types is high, and includes essentially all known soapstone tool categories. In general, the project area appears to be a place of soapstone use, with little evidence of manufacturing. The abundant biface manufacturing debris, combined with finished ground stone plant-processing tools, suggests that the project area supported a variety of activities that reflect some degree of temporary habitation.

Thus, 9Ri158 contrasts sharply with the classic riverine, shell midden Late Archaic, as exemplified by the Stallings Island site, in artifact density, feature density, intensity of occupation, and activities represented. While other shell midden sites on the Savannah River, such as 9Ri(DOT)27 (Bowen and Robertson 1984) and Mims Point (Elliott 1983), are known and have been test excavated, survey in the area (Elliott and Doyon 1981; Bowen 1984) has shown that shell midden sites are only one type of Late Archaic site and that Stallings Island, with its 2.5 m thick shell midden, is unique. Survey up to 100 km north and south of Stallings Island (i.e., Russell Reservoir, Clarks Hill Lake, Savannah River Plant, Briar Creek, Groton Plantation) have shown that shell midden sites are essentially limited to the Fall Line shoals area of the Savannah River, north of Augusta.

9Ri158 appears similar to Late Archaic/Early Woodland sites identified in the upper portion of the Coastal Plain. Late Archaic sites located along the broad terraces of Briar Creek (Elliott and O'Steen 1987a) and the first terrace of the Savannah River (Ledbetter et al. 1980) exhibit extensive artifact scatters. These extensive sites contain few features and appear to be repeatedly occupied but impermanent camps (Elliott and O'Steen 1987a).

9Ri158 is also similar in artifact content to 9Ri86, a Late Archaic/Early Woodland site in the floodplain of the Savannah River immediately south of Augusta. However, 9Ri86 may have been more intensively occupied based on the presence of ceramics and greater artifact density. The density at 9Ri86 ranged from 222 to 2244 artifacts/m<sup>2</sup> in six test pits, with a site average of 705/m<sup>2</sup>. As revealed by the shovel tests, artifact density at 9Ri158 ranged from 12 to 708 artifacts/m<sup>2</sup> with a site average of 151 artifacts/m<sup>2</sup>. For added comparison, the Mims Point shell midden site (Elliott 1983) had densities ranging from 180 to 536 artifacts/m<sup>2</sup> in four test pits, producing a site average of at least 326 artifacts/m<sup>2</sup>.

Portions of the greater site area of 9Ri158, namely 9Ri(DOT)27, would likely produce artifact densities comparable to these other sites. It seems clear that the 9Ri158 project area was not as heavily utilized as that portion of the large Late Archaic/Early Woodland site nearest the river.



**The Late Woodland/Early Mississippian Periods.** Woodland and Early Mississippian occupation was apparently restricted to the area of 9Ri(DOT)25 east of the project area and closer to the river. The few diagnostic artifacts recovered during Bowen's (1984) testing and the few projectile points in the private collections suggest minimal use of the area during the time corresponding to Middle Woodland through Mississippian.

**The Late Mississippian Period.** A few small triangular points that could indicate either Late Woodland or Early Mississippian occupation were found east of the canal but not in the project area. The ceramics recovered from the project area are definitely from a very late Lamar component. The jar recovered from Feature 9, by comparison with Piedmont styles, dates to a period of A.D. 1500 to 1650. The crudely executed Lamar complicated stamping visible on sherds from the site is similar to ceramic styles identified with contact period sites in north Georgia (Ledbetter and O'Steen 1986; Wood and Smith 1987), thought to date to the period of A.D. 1550 to 1650.

The Lamar occupation is characterized by a sparse, but extensive, ceramic scatter and medium to large pits. The site contained no obvious structural features such as postmolds or domestic midden areas. Basically, the Pig Pen site is dissimilar to previously excavated Lamar habitation sites characterized by obvious structural features and dense artifact concentrations.

If the Pig Pen site is a specialized Lamar site type, the question of specialization is difficult to determine based on the sparse subsistence remains. However, the obvious explanation points to the adjacent "fisheries" referenced in early historic accounts (Swanton 1946; Hudson 1976). Indians were known to have made yearly spring fishing expeditions to the area in early historic times (Swanton 1946) and such scheduling likely occurred in earlier Lamar times when the Savannah River Valley was virtually uninhabited.

The Lamar features on 9Ri158 contained seeds identifying a springtime occupation. The features also produced fall species, primarily hickory nuts and acorns, but these may represent fuel sources or contamination from the Archaic midden. Cultigens, however, were not present in the features. The vessel recovered from Feature 9 could have been used for either cooking or storage. The pits appear to be storage pits with the exception of a single, clay-lined hearth or earth oven. The absence of bone in the hearth may indicate its use as a smudge pit or smoking pit.

The processes required in processing and storing fish during the few weeks of the spring fishing season should be reflected archeologically. Unfortunately, there has been little previous research into this site category. The evidence supporting 9Ri158 as a fish processing site is far from overwhelming. This site type is known to have existed at the falls of the Savannah. There is ample description of how fish were caught, cooked, and processed in early historic Indian times, but little indication of the methods involved in the processing and storage of the large quantities of fish taken during major fishing expeditions (Swanton 1946).



The presence of a specialized hunting or fishing site in this portion of the Savannah River Valley may be consistent with archeological data indicating abandonment by A.D. 1450 (Hudson et al. 1984). Even if the valley was not used for habitation, the use of its resources would not have been ignored. Seasonal hunting or fishing trips would have continued throughout the Lamar period. In all probability, the archeological evidence of the brief visits would be minimal.

During the eighteenth and nineteenth centuries, the described site areas were simply portions of a large plantation tract that was bought and sold primarily by influential members of the Augusta community. The gentleman farmers of the late eighteenth and nineteenth centuries maintained the plantation as a business while living in their city homes in nearby Augusta or Summerville. The highly productive shoals or fisheries adjacent to the site were a significant monetary concern of these plantation owners.

For the past 150 years the site area has been affected by Augusta industrial and commercial development. These impacts have included the construction of the Augusta Canal, a railroad line, and the Augusta water works pumping station.







## REFERENCES

**Alterman, Michael L.**

- 1985 The Late Archaic Period Along the Savannah River Valley. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama.

**Anderson, David G. and Glen T. Hanson**

- 1985 The Early Archaic Occupation of the Savannah River Basin. Paper presented at the Annual Meeting of the Southeastern Archeological Conference. Birmingham, Alabama.

**Anderson, David G. and Joseph Schuldenrein, assemblers**

- 1985 Prehistoric Human Ecology Along the Upper Savannah River: Excavations at the Rucker's Bottom, Abbeville and Bullard Site Groups. *Russell Papers*. Archaeological Services, National Park Service, Atlanta.

**Anderson, David G., David J. Hally and James L. Rudolph**

- 1986 The Mississippian Occupation of the Savannah River Valley. *Southeastern Archaeology* 5(1):32-51.

**Anderson, David G., Jerald Ledbetter, Lisa O'Steen, Daniel T. Elliott, Dennis Blanton, Glen T. Hanson, and Frankie Snow**

- 1987 Paleoindian and Early Archaic in the Lower Southeast: A View from Georgia. Paper presented at the Ocmulgee National Monument 50th Anniversary Conference, Macon, Georgia.

**Augusta Directory and City Advertiser**

- 1841 Published by K. Woodward, Augusta, Georgia.

**Augusta Daily Chronicle and Sentinel**

- 1845 May 8, Vol. IX, No. 107. Augusta, Georgia.

**Bartovics, Albert F.**

- 1981 The Archaeology of Daniels Village: An Experiment in Settlement Archaeology. Ph.D. dissertation. Brown University. Providence, Rhode Island.

**Blanton, Dennis D. and Kenneth E. Sassaman**

- 1985 Pattern and Process in the Middle Archaic of South Carolina. In *Studies in South Carolina Archaeology in Honor of Robert L. Stephenson*, A. C. Goodyear, editor. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

**Bowen, William R.**

- 1978 An Archaeological Survey of S.R. 56 Relocation (Georgia DOT Project #PESP-56 Loop and PR 865) in Richmond County, Georgia. Ms. on file, Georgia Department of Transportation, Atlanta.



- Bowen, William R.**  
 1979 Augusta Railroad Relocation Demonstration Project, Volume II, Intensive Archaeological Survey: Identification of Resources and Assessment of Impacts. Ms. on file, Georgia Department of Transportation, Atlanta.  
 1984 An Intensive Archaeological Survey of GDOT Project M-7050(1), Richmond County Murray Road Extension. Ms. on file, Georgia Department of Transportation, Atlanta.
- Bowen, William R. and Thomas H. Robertson**  
 1984 Archaeological and Historical Assessment, Augusta Canal Hydroelectric Project. Baldwin and Cranston Associates, Augusta. Prepared for the City Council of Augusta, Georgia.
- Brockington, Paul**  
 1971 A Preliminary Investigation of an Early Knapping Site in Southeastern Georgia. *University of South Carolina Report* 3(2).
- Bullen, Ripley P. and Bruce H. Greene**  
 1970 Stratigraphic Tests at Stallings Island, Georgia. *Florida Anthropologist* 23:18-28.
- Caldwell, Joseph**  
 1954 The Old Quartz Industry of Piedmont Georgia and South Carolina. *Southern Indian Studies* 5:37-39.
- Caldwell, Joseph and Antonio J. Waring**  
 1942 The Use of Ceramic Sequence in the Classification of Aboriginal Sites in Chatham County, Georgia. *Southeastern Archaeological Conference Newsletter* 2(1).
- Caldwell, Joseph, Catherine McCann, and Frederick S. Hulse**  
 1941 *Irene Mound Site, Chatham County, Georgia*. University of Georgia Press, Athens.
- Cambron, James W. and David C. Hulse**  
 1975 *Handbook of Alabama Archaeology: Part I Point Types*. Revised edition. The Archaeological Research Association of Alabama, Moundville.
- Campbell, L. Janice, Carol S. Weed, and Thomas D. Montagne**  
 1980 Archaeological Investigations at the Fort Gordon Military Reservation, Georgia. *New World Research Report of Investigations* 33. Baton Rouge, Louisiana.
- Campbell, L. Janice, Carol S. Weed, and Prentice M. Thomas, Jr.**  
 1981 Late Archaic Occupations in the Sand Hills Region of Georgia: Application of the Focal-Diffuse Model. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Ashville, North Carolina.
- Candler, Allen D.**  
 1904-1916 The Colonial Records of the State of Georgia. Vols. 8 and 9. Journal of the Proceedings of the Governor and Council, 1759- 1762. Franklin-Turner, Atlanta.
- Carbone, Victor**  
 1983 Late Quaternary Environments in Florida and the Southeast. *Florida Anthropologist* 36(1-2):3-17.
- Cashin, Edward J.**  
 1980 *The Story of Augusta*. Richmond County Board of Education, Augusta, Georgia.  
 1986 *Colonial Augusta, "Key of the Indian Country."* Mercer University Press, Macon, Georgia.



**Chapman, Jefferson**

1975 The Rose Island Site and the Bifurcate Point Tradition. *Report of Investigations* No. 14. Department of Anthropology, University of Tennessee, Knoxville.

1977 Archaic Period Research in the Lower Little Tennessee River Valley, 1975: Icehouse Bottom, Harrison Branch, Thirty Acre Island, Calloway Island. Prepared for the National Park Service. Funded by the Tennessee Valley Authority.

**Chapman, John A.**

1897 *History of Edgefield County from the Earliest Settlements to 1897*. Elbert H. Aull, Newberry, South Carolina.

**Charles, Tommy (contributor)**

1986 Points of the Paleo Indian Period. *Institute of Archaeology and Anthropology Notebook* 18:14-16. University of South Carolina, Columbia.

**Claflin, William H., Jr.**

1931 The Stalling's Island Mound, Columbia County, Georgia. *Papers of the Peabody Museum of American Archaeology and Ethnology*, Vol 19, No. 1. Harvard University, Cambridge, Massachusetts.

**Claggett, Stephen R. and John S. Cable (assemblers)**

1982 The Haw River Sites: Archaeological Investigations at Two Stratified Sites in the North Carolina Piedmont. Ms. on file, Commonwealth Associates, Jackson, Michigan.

**Coe, Joffre L.**

1964 *The Formative Cultures of the Carolina Piedmont*. Transactions of the American Philosophical Society, New Series. Vol. 54. American Philosophical Society, Philadelphia.

**Coleman, Kenneth and Charles S. Gurr (ed.)**

1983 *Dictionary of Georgia Biography* Vol 1. University of Georgia Press, Athens.

**Cridlebaugh, Patricia A.**

1977 An Analysis of the Morrow Mountain Component at the Icehouse Bottom Site and a Reassessment of the Morrow Mountain Complex. Master's thesis. University of Tennessee, Knoxville.

1983 Intensive Archaeological Survey and Testing of Two Prehistoric Cairn Sites: Clarks Hill Lake Project Area. Prepared for the U.S. Corps of Engineers, Savannah District.

**Davis, Robert S., Jr.**

1986 *Encounters on a March Through Georgia in 1779*. The Partridge Pond Press, Sylvania, Georgia.

**DeBaillou, C.**

1965 A Test Excavation of the Hollywood Mound (9Ri1), Georgia. *Southern Indian Studies* 17:3-11.

**Deed Books**

1787-1922 Richmond County Courthouse, Augusta, Georgia.

**Delcourt, P.A. and H.R. Delcourt**

1983 Late Quaternary Vegetational Dynamics and Community Stability Reconsidered. *Quaternary Research* 19:265-271.

**Dincauze, Dena Ferran**

1976 *The Neville Site: 8,000 Years at Amoskeag, Manchester, New Hampshire*. Peabody Museum of Archaeology and Ethnology. Harvard University, Cambridge, Massachusetts.



**Dye, David Howard**

- 1976 The Bilbo Sites Revisited: Archaeological Investigations from Chatham County, Georgia. Masters thesis. Department of Geography and Anthropology. Louisiana State University, Baton Rouge.

**Elliott, Daniel T.**

- 1981 The Augusta Railroad Relocation Project: Archaeological Testing of Six Sites. Ms. on file, Department of Anthropology, University of Georgia, Athens.
- 1983 Preliminary Investigation at Mims Point, Edgefield County, Edgefield Ranger District. Prepared for Sumter National Forest, Greenwood, South Carolina.
- 1986 Two Years Before the Bear: The Savannah River Watershed. Paper presented at the Athens Meeting of the Society for Georgia Archaeology.
- 1987 Archaeological Testing on 38FA188, Fairfield County, South Carolina. Garrow and Associates, Atlanta. Prepared for Law Environmental, Inc., Kennesaw, Georgia

**Elliott, Daniel T. and Roy Doyon**

- 1981 Archaeology and Historical Geography of the Savannah River Floodplain Near Augusta, Georgia. *Laboratory of Archeology Series Report* No. 22. University of Georgia, Athens.

**Elliott, Daniel T. and Lisa D. O'Steen**

- 1987a Anatomy of the Brier Creek Archaic. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Charleston, South Carolina.
- 1987b Archaeological Survey of the Ridgeway Mining Company Development Tract, Fairfield County, South Carolina. Garrow and Associates, Atlanta. Prepared for Law Environmental, Inc., Kennesaw, Georgia.

**Fairbanks, Charles H.**

- 1942 The Taxonomic Position of Stallings Island, Georgia. *American Antiquity* 7:223-231.

**Ferguson, Leland G. and Randolph J. Widmer**

- 1976 Archeological Examination of a Transect Through the Middle Savannah River Valley: The Bobby Jones Expressway, Richmond County, Georgia. *Institute of Archaeology and Anthropology Manuscript Series* No. 89. University of South Carolina, Columbia.

**Garrow, Patrick, Claudia Watson, Thomas R. Wheaton and William H. Adams**

- 1978 A Cultural Resources Inventory and Archaeological Survey for the Augusta 201 Facilities Plan, Augusta, Georgia. Ms. on file, Soil Systems, Inc., Marietta, Georgia.

**Georgia Department of Natural Resources**

- 1976 *Geologic Map of Georgia*. Georgia Department of Natural Resources, Atlanta.

**Gleason, D.K.**

- 1958 *The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada*. Hafner Press.

**Goff, John H.**

- 1953 Some Geographic Aspects of Arterial Indian Paths Across the Georgia Piedmont. In *Short Contributions to the Geology, Geography and Archaeology of Georgia* No. 2., pp. 330-336. The Geological Survey, Bulletin No. 60. Georgia State Division of Conservation, Department of Mines, Mining and Geology, Atlanta.



**Goodyear, Albert C.**

- 1978 Archeological Survey of the Primary Connector from Laurens to Anderson, South Carolina. *Institute of Archaeology and Anthropology Research Manuscript Series* No. 122. University of South Carolina, Columbia.

**Goodyear, Albert C. and Tommy Charles**

- 1984 An Archeological Survey of Chert Quarries in Western Allendale County, South Carolina. *Institute of Archaeology and Anthropology Research Manuscript Series* No. 195. University of South Carolina, Columbia.

**Gresham, Thomas H.**

- 1985 Archeological Investigations at 9Lc24, Lincoln County, Georgia. Southeastern Archeological Services, Athens, Georgia. Prepared for U.S. Army Corps of Engineers, Savannah District.

**Hally, David J. and James L. Rudolph**

- 1986 An Operating Plan for the Mississippi Period in the Georgia Piedmont. *Laboratory of Archaeology Report* No. 24. University of Georgia, Athens.

**Hanson, Glen T.**

- 1982 The Analysis of Late Archaic-Early Woodland Adaptive Change along the Middle Savannah River: A Proposed Study. *Institute of Archaeology and Anthropology Notebook* 14:1-38. University of South Carolina, Columbia.

**Hanson, Glen T. and Chester B. DePratter**

- 1985 The Early and Middle Woodland Periods in the Savannah River Valley. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama.

**Hanson, Glen T., Jr., Rachel Most, and David G. Anderson**

- 1978 The Preliminary Archeological Inventory of the Savannah River Plant, Aiken and Barnwell Counties, South Carolina. *Institute of Archaeology and Anthropology Research Manuscript Series* No. 134. University of South Carolina, Columbia.

**Hemperley, Marion R.**

- 1974 *English Crown Grants in St. Paul Parish in Georgia 1755- 1775*. Surveyor General Department, Atlanta.

**Hodler, Thomas W. and Howard A. Schretter**

- 1986 *The Atlas of Georgia*. The Institute of Community and Area Development. University of Georgia Press, Athens.

**Holman, J. Alan**

- 1985 Ladds Quarry in Bartow County. *National Geographic Research* 1(3):423-436.

**House, John H. And David L. Ballenger**

- 1976 An Archeological Survey of the Interstate 77 Route in the South Carolina Piedmont. *Institute of Archaeology and Anthropology Research Manuscript Series* No. 104. University of South Carolina, Columbia.

**House, John H. and Ronald W. Wogaman**

- 1978 Windy Ridge, a Prehistoric Site in the Inter-Riverine Piedmont in South Carolina. *Anthropological Studies* 3. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.



- Hudson, Charles**  
1976 *The Southeastern Indians*. University of Tennessee Press, Knoxville.
- Hudson, Charles, Marvin T. Smith, and Chester B. DePratter**  
1984 The Hernando DeSoto Expedition: From Apalachi to Chiaha. *Southeastern Archaeology* 3(1):65-77.
- Jones, C. C.**  
1873 *Antiquities of the Southern Indians, Particularly of the Georgia Tribes*. Appleton, New York.
- Jones, C.C.**  
1880a Centers of Primitive Manufacture in Georgia. *Magazine of American History* 5:347-350.  
1880b Primitive Manufacture of Spear and Arrow Points Along the Line of the Savannah River. *Smithsonian Institution Annual Report, 1879*, pp. 376-382.
- Jones, Charles C., Jr. and Salem Dutcher**  
1890 *Memorial History of Augusta, Georgia*. D. Mason, Syracuse, New York.
- Jones, Dorothy M. (compiler)**  
1982 Wrightsborough 1768, Wrightsboro 1799, McDuffie County, Georgia 1870, "Preserving Our Heritage With Records." Wrightsboro Quaker Community Foundation, Inc., Thomson, Georgia.
- Joseph, J. Walter, Jr.**  
1971 Excavations Near the Site of Fort Moore, Aiken County, South Carolina. *Institute of Archaeology and Anthropology Notebook*. University of South Carolina, Columbia.
- Ledbetter, R. Jerald, Roy Doyon and W. Dean Wood**  
1980 A Cultural Resource Survey of the Proposed Butler Creek Sewage Pipeline Corridor. Prepared for Besson and Pope Consulting Engineers, Inc., Augusta. Ms. on file, Southeastern Wildlife Services, Inc., Athens, Georgia.
- Ledbetter, Jerald and Lisa O'Steen**  
1986 Late Mississippian Settlement North of the Oconee Province. *The Profile* 54:9-12.
- Ledbetter, R. Jerald, Karen G. Wood, and Cynthia Miller**  
1985 Archeological Investigations at Mistletoe State Park, Columbia County, Georgia. Southeastern Archeological Services, Inc., Athens, Georgia. Prepared for Georgia Department of Natural Resources, Atlanta.
- Lewis, George S.**  
1987 Professional-avocational Interaction: A Review of Twelve Years of Activity at the SCIAA SRP-ARP, South Carolina. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Charleston, South Carolina.
- Martin, Alexander and William D. Barkley**  
1961 *Seed Identification Manual*. University of California Press, Berkeley.
- Miller, Carl**  
1948 Appraisal of the Archeological Resources of the Clarks Hill Reservoir Area, South Carolina and Georgia. Manuscript No. 74, Department of Anthropology, University of Georgia, Athens.  
1949 The Lake Spring Site, Columbia County, Georgia. *American Antiquity* 15:38-51.



**Moore, Clarence B.**

- 1898 Certain Aboriginal Mounds of the Savannah River. *Journal of the Academy of Natural Sciences of Philadelphia*, Second Series 2:162-172.

**Moore, W.O., Jr.**

- 1973 The Largest Exporters of Deerskins from Charles Town 1735-1775. *The South Carolina Historical Magazine* 74:144-150.

**National Register of Historic Places**

- 1977 Nomination Form: Historic Augusta Canal and Industrial District. National Park Service, Atlanta.

**Neill, W. T.**

- 1966 Westo Bluff, a Site of the Old Quartz Culture in Georgia. *Florida Anthropologist* 19:1-10.
- 1968 The Galphin Trading Post Site at Silver Bluff, South Carolina. *Florida Anthropologist* 21.

**Norwood, Martha F.**

- 1975 A History of the White House Tract of Richmond County, Georgia, 1756-1975. Georgia Department of Natural Resources, Historic Preservation Section, Atlanta.

**O'Steen, Lisa D.**

- 1983 Early Archaic Settlement Patterns in the Wallace Reservoir: An Inner Piedmont Perspective. *Laboratory of Archaeology Series* No. 25. University of Georgia, Athens.

**O'Steen, Lisa D., R. Jerald Ledbetter, Daniel T. Elliott, and William W. Barker**

- 1987 PaleoIndian Sites of the Inner Piedmont of Georgia: Observations of Settlement in the Oconee Watershed. *Early Georgia* 13 (In Press).

**Panshin, A.J. and Carl de Zeeuw**

- 1964 *Textbook of Wood Technology*, Vol. 1. McGraw-Hill, New York.

**Paulk, Herschel L.**

- 1981 *Soil Survey of Richmond County, Georgia*. U.S.D.A. Soil Conservation Service in cooperation with the University of Georgia, College of Agriculture, Agricultural Experiment Station, Athens.

**Peterson, D.**

- 1971 Time and Settlement in the Archeology of Groton Plantation, South Carolina. Ph.D. dissertation. Harvard University, Cambridge, Massachusetts.

**Phelps, D.S. and R. Burgess**

- 1964 A Possible Case of Cannibalism in the Early Woodland Period of Eastern Georgia. *American Antiquity* 30:199-202.

**Polhemus, R.**

- 1971 Excavations at Fort Moore-Savano Town (38AK4 & 5). *Institute of Archaeology and Anthropology Notebook* 3(6). University of South Carolina, Columbia.

**Radford, A. E.**

- 1968 *Manual of the Vascular Flora of the Carolinas*. University of North Carolina Press, Chapel Hill.

**Robertson, Thomas H.**

- 1977 Notes on the Development of the Augusta Water Works. *The Georgia Operator* 14(4):8-9,34,38.



- Rudolph, James L. and David J. Hally**  
 1985 Archaeological Investigations at the Beaverdam Creek Site (9Eb85), Elbert County, Georgia. *Russell Papers*. Archaeological Services Branch, National Park Service, Atlanta.
- Sassaman, Kenneth E.**  
 1983 Middle and Late Archaic Settlement in the South Carolina Piedmont. Masters thesis, Department of Anthropology, University of South Carolina, Columbia.  
 1985 A Preliminary Typological Assessment of MALA Hafted Bifaces from the Pen Point Site, Barnwell County, South Carolina. *South Carolina Antiquities* 17.
- Sassaman, Kenneth E., Glen T. Hanson, and Tommy Charles**  
 1987 Raw Material Procurement and the Reduction of Hunter-Gatherer Range in the Savannah River Valley. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Charleston, South Carolina.
- Sears, W.H. and J.B. Griffin**  
 1950 Type Descriptions: Fiber Tempered Pottery. In *Prehistoric Pottery of the Eastern United States*, edited by J.B. Griffin. University of Michigan Museum of Anthropology, Ann Arbor.
- South, Stanley**  
 1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.
- Steiner, R.**  
 1899 Prehistoric Settlement, Big Kiokee Creek, Georgia. *American Association for the Advancement of Science, Proceedings*, pp. 379-382.
- Stoltman, James B.**  
 1974 Groton Plantation, an Archaeological Study of a South Carolina Locality. *Monographs of the Peabody Museum* No. 1. Harvard University, Cambridge, Massachusetts.
- Suhm, Dee Ann and Edward B. Jelks**  
 1962 Handbook of Texas Archaeology: Type Descriptions. Published jointly by the Texas Archaeological Society, *Special Publication* No. 1. and the Texas Memorial Museum, *Bulletin* No. 4, Austin.
- Swanton, John R.**  
 1946 *The Indians of the Southeastern United States*. Bureau of American Ethnology Bulletin No. 137. Washington, D.C.
- Taylor, Richard L. and Marion F. Smith**  
 1978 The Report of the Intensive Survey of the Richard B. Russell Dam and Lake, Savannah River, Georgia and South Carolina. *Institute of Archaeology and Anthropology Research Manuscript Series* 142. University of South Carolina, Columbia.
- Tax Digest**  
 1800, 1818, 1850 Richmond County Courthouse, Augusta, Georgia.
- Thomas, C.**  
 1894 *Report on the Mound Explorations of the Bureau of American Ethnology*. Bureau of American Ethnology, 12th Annual Report, 1890-1891.
- U. S. Census**  
 1860 Population Schedule



**Van Doren, Mark, editor**

1928 *Travels of William Bartram*. Dover, New York.

**Wauchope, Robert**

1966 *Archaeological Survey of Northern Georgia: With a Test of Some Cultural Hypotheses*. Memoirs of the Society for American Archaeology, No. 21. Salt Lake City.

**Waring, A. J. and P. Holder**

1968 The Deptford Ceramic Complex. In *The Waring Papers*, S. Williams, ed., pp. 135-151. Papers of the Peabody Museum of Archaeology and Ethnology No. 58. Harvard University, Cambridge, Massachusetts.

**White, George**

1849 *Statistics of the State of Georgia*. W. Thorne Williams, Savannah.

**Will Books**

1818, 1870 Richmond County Courthouse, Augusta, Georgia.

**Williams, Stephen, editor**

1968 *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.*. Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

**Wood, W. Dean and Charlotte A. Smith**

1987 The Anthony Shoals Site, 9Ws51, An Archeological Evaluation. Prepared for U.S. Army Engineer District, Savannah, and Gulf South Research Institute, Baton Rouge. Ms. on file, Southeastern Archeological Services, Inc., Athens, Georgia.

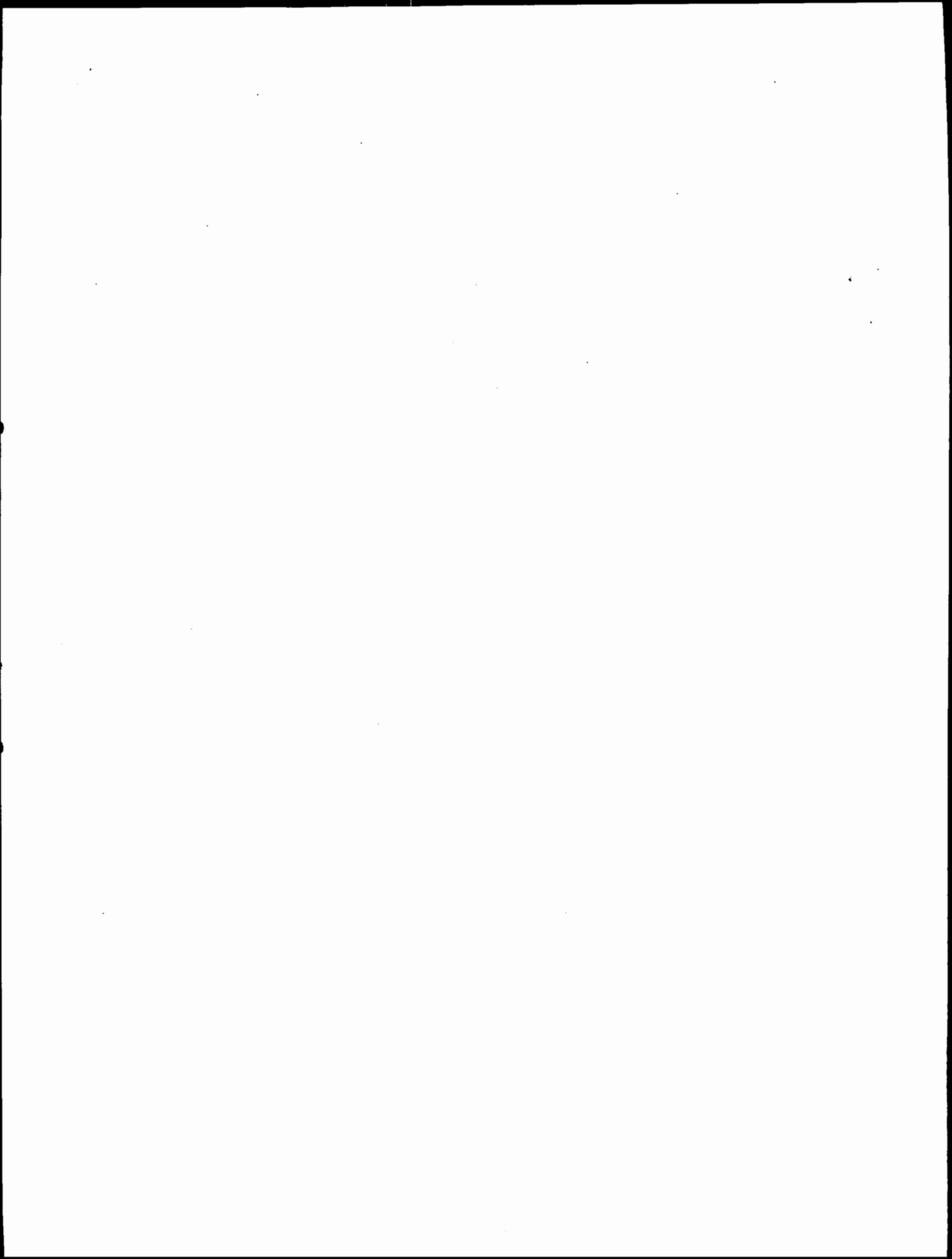
**Wood, W. Dean, Teresa P. Rudolph, and Mark J. Brooks**

1985 The Prehistoric Archaeology of the Savannah River Valley. Paper presented at the 1985 Southeastern Archaeological Conference, Birmingham, Alabama.

**Wood, W. Dean, Dan T. Elliott, Teresa P. Rudolph, and Dennis B. Blanton**

1986 Prehistory in the Richard B. Russell Reservoir: The Archaic and Woodland Periods of the Upper Savannah River. *Russell Papers*. Prepared for U.S. Army Corps of Engineers, Savannah District, and National Park Service, Atlanta.







## **APPENDIX A: BOTANICAL AND FAUNAL INVENTORY**



Table A1. Summary of Faunal Remains

PROVENIENCE	COUNT	WEIGHT
All Shovel Tests (1/4 in screened)		
Vertebrates		
<u>Sus scrofa</u> (pig)	1 deciduous premolar fragment, gnawed	2.5 g
Artiodactyla	1 cf. tibia fragment (gnawed)	1.1 g
Unidentified mammal	8 fragments, includes 2 shaft fragments with sawing and cut marks	7.7 g
Invertebrates		
Unidentified Unionidae	2 fragments	2.6 g
Pelecypoda	5 fragments	37.7 g
Feature 17 (1/8 in screened)		
Unidentified bone	2 fragments	0.4 g
Unidentified Unionidae	1 fragment	0.5 g
Block A midden (1/4 in screened)		
Vertebrates		
Artiodactyla	1 navicular (tarsal)	2.8 g
Unidentified mammal	1 fragment	1.4 g
Invertebrates		
Unidentified Unionidae	2 fragments	2.3 g
Block B midden (1/4 in screened)		
Unidentified bone	1 fragment	0.1 g
Unidentified Unionidae	3 fragments	2.1 g
Block D plowzone (1/4 in screened*)		
Artiodactyla	1 tooth fragment	0.3 g
Unidentified mammal	25 fragments (1 sawn)	13.5 g
Block E plowzone (1/4 in screened)		
Unidentified Unionidae	1 fragment	0.8 g

\*probably historic



Table A2. Archeobotanical Analysis.

## Mississippian Features

	Feature 9				Feature 12				Feature 16	
	lt		hv		1/8 in		hv		lt	
	(g)	(n)	(g)	(n)	(g)	(n)	(g)	(n)	(g)	(n)
Total sample weight	4.0	-	0.5	-	0.7	-	0.8	-	4.2	-
Total no. frags (2 mm screen)	-	37	-	27	-	20	-	18	-	30
Sample composition	-	30	-	13	-	19	-	17	-	30
wood	1.5	-	3.3	-	0.7	-	0.8	-	3.2	-
nutshell	-	-	0.2	-	0.1	-	0.1	-	-	-
seeds/fruits	0.1	7	<0.1	-	-	-	-	-	-	-
residual (1 & 2 mm screen)	2.4	-	-	-	-	-	-	-	1.0	-
Nutshell composition										
<u>Carya</u> sp. (thick shelled hickory)	-	-	-	14	-	1	-	-	-	-
<u>Juglans</u> sp. (butternut/walnut)	-	-	-	-	-	-	-	1	-	-
<u>Quercus</u> sp. (acorn)*	-	-	-	-	-	-	-	S	-	-

\*N=nut, S=shell, M=meat

## Mississippian features continued

	Feature 16		Feature 17		Feature 18		Feature 19		Feature 20	
	hv		lt		hv		lt		hv	
	g	n	g	n	g	n	g	n	g	n
Total sample weight	3.2	-	0.3	-	0.2	-	3.1	-	1.4	-
Total no. frags (2 mm screen)	-	47	-	34	-	8	-	32	-	-
Sample composition	-	30	-	10	-	8	-	30	-	30
wood	2.1	-	0.2	-	0.2	-	1.5	-	1.4	-
nutshell	1.1	-	-	-	-	-	0.1	-	-	30
seeds/fruits	<0.1	-	0.1	24	-	-	<0.1	1	-	-
residual (1 & 2 mm screen)	-	-	-	-	-	-	1.5	-	-	-
Nutshell composition										
<u>Carya</u> sp. (thick shelled hickory)	-	16	-	-	-	-	-	1	-	-
<u>Juglans</u> sp. (butternut/walnut)	-	1	-	-	-	-	-	-	-	-
<u>Quercus</u> sp. (acorn)*	-	M	-	-	-	-	-	-	-	-

\*N=nut, S=shell, M=meat



# Archaic Features

	Feature 2				Feature 5				Feature 8			
	lt		hv		lt		hv		lt		hv	
	g	n	g	n	g	n	g	n	g	n	g	n
Total sample weight	<0.1	-	<0.1	-	<0.1	-	0.1	-	<0.1	-	-	-
Total no. frags (2 mm screen)	-	6	-	5	-	6	-	13	-	-	-	4
Sample composition	-	6	-	2	-	5	-	13	-	-	-	4
wood	<0.1	-	<0.1	-	<0.1	-	0.1	-	<0.1	-	-	-
nutshell	-	-	0.1	-	0.1	-	-	-	-	-	-	-
seeds/fruits	-	-	-	-	-	-	-	-	-	-	-	-
residual	-	-	-	-	-	-	-	-	-	-	-	-
(1 & 2 mm screen)												
Nutshell composition												
<u>Carya</u> sp.	-	-	-	3	-	-	-	-	-	-	-	-
(thick shelled hickory)												
<u>Juglans</u> sp.	-	-	-	-	-	-	-	-	-	-	-	-
(butternut/walnut)												
<u>Quercus</u> sp. (acorn)*	-	-	-	-	-	-	-	1	-	-	-	-

\*N=nut, S=shell, M=meat

## Achaic features continued

	Feature 11				Feature 15			
	lt		hv		lt		hv	
	g	n	g	n	g	n	g	n
Total sample weight	<0.1	-	0.2	-	0.1	-	-	-
Total no. frags (2 mm screen)	-	3	-	10	-	10	-	6
Sample composition	-	3	-	9	-	10	-	5
wood	<0.1	-	0.2	-	0.1	-	<0.1	-
nutshell	-	-	<0.1	-	-	-	<0.1	-
seeds/fruits	-	-	-	-	-	-	-	-
residual	-	-	-	-	-	-	-	-
(1 & 2 mm screen)								
Nutshell composition								
<u>Carya</u> sp.	-	-	-	-	-	-	-	1
(thick shelled hickory)								
<u>Juglans</u> sp.	-	-	-	-	-	-	-	-
(butternut/walnut)								
<u>Quercus</u> sp. (acorn)*	-	-	-	-	-	-	-	-

\*N=nut, S=shell, M=meat



# Archaic Midden

	Block A		Block B				Block C			
	lt		lt		hv		lt		hv	
	g	n	g	n	g	n	g	n	g	n
Total sample weight	<0.1	-	0.1	-	1.0	-	-	-	-	-
Total no. frags (2 mm screen)	-	4	-	9	-	32	-	1	-	6
Sample composition	-	4	-	5	-	30	-	1	-	5
wood	<0.1	-	0.1	-	1.0	-	<0.1	-	<0.1	-
nutshell	-	-	<0.1	-	<0.1	-	-	-	<0.1	-
seeds/fruits	-	-	-	-	<0.1	1	-	-	-	-
residual	-	-	-	-	-	-	-	-	-	-
(1 & 2 mm screen)										
Nutshell composition										
<u>Carya</u> sp.	-	-	-	-	-	1	-	-	-	-
(thick shelled hickory)										
<u>Juglans</u> sp.	-	-	-	-	-	-	-	-	-	1
(butternut/walnut)										
<u>Quercus</u> sp. (acorn)*	-	-	-	4(M)	-	-	-	-	-	-

\*N=nut, S=shell, M=meat



Table A3. Wood Charcoal Identification (N).

Mississippian Features	9 lt	9 hv	12 1/8 in	12 hv	16 lt	16 hv	17 lt	17 hv	18 lt	18 hv	TOTAL
Genus/Species											
<u>Carya</u> sp. (hickory)	-	-	4	1	-	-	1	-	5	-	11
<u>Pinus</u> sp. (pine)	15	11	11	12	1	9	7	4	20	-	90
<u>Quercus</u> sp. (oak)	-	1	-	-	-	-	-	3	-	-	4
red oak group	-	-	1	3	24	15	2	-	3	30	78
white oak group	-	-	3	1	5	6	-	-	2	-	17
bark	14	-	-	-	-	-	-	-	-	-	14
unidentifiable	-	-	-	-	-	-	-	-	-	-	-
grass stem	1	1	-	-	-	-	-	1	-	-	3
TOTAL	30	13	19	17	30	30	10	8	30	30	217

Archaic Features	2 lt	2 hv	5 lt	8 lt	8 hv	11 lt	11 hv	15 lt	15 hv	TOTAL
Genus/Species										
<u>Carya</u> sp. (hickory)	-	2	-	-	-	-	5	2	-	9
<u>Pinus</u> sp. (pine)	3	-	5	2	1	-	2	5	2	20
<u>Quercus</u> sp. (oak)	-	-	-	-	3	-	-	3	3	9
red oak group	-	-	-	-	-	3	2	-	-	5
white oak group	2	-	-	2	-	-	-	-	-	4
bark	-	-	-	-	-	-	-	-	-	0
unidentifiable	-	-	-	6	-	-	-	-	-	6
grass stem	1	-	-	3	-	-	-	-	-	4
TOTAL	6	2	5	13	4	3	9	10	5	57

Archaic Midden	Block A lt	Block B lt hv	Block C lt hv	TOTAL
Genus/Species				
<u>Carya</u> sp. (hickory)	-	-	-	2
<u>Pinus</u> sp. (pine)	4	-	2	7
<u>Quercus</u> sp. (oak)	-	5	24	32
red oak group	-	-	4	4
white oak group	-	-	-	0
bark	-	-	-	0
unidentifiable	-	-	-	0
grass stem	-	-	-	0
TOTAL	4	5	30	45



Table A4. Seed and Fruit Identification.  
(W=whole, F=fragment)

Family/Genus	Features					
	9 lt	9 hv	16 hv	17 lt	18 lt	Block B hv
Berberidaceae (barberry)	1F	-	-	6W,10F	-	-
<u>Myrica</u> sp. (bayberry)	5W,10F	6F	-	1W,2F	-	-
Poaceae (grass)	-	-	-	-	-	1F
<u>Nyssa</u> sp. (gum)	-	-	1F	-	-	-
<u>Smilax</u> sp. (greenbriar)	-	-	-	1W	-	-
<u>Vitis</u> sp. (grape)	-	-	-	-	1W	-







## **APPENDIX B: SHOVEL TEST ARTIFACT INVENTORY**



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	UD ROCK	CER	HIST	GRND TOT
320N/500E																				
chert	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
quartz	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
meta	-	-	2	-	-	-	-	-	2	-	-	1	-	1	3	-	-	-	-	-
TOTAL	-	-	2	-	2	-	-	-	4	-	-	1	-	1	5	-	5	-	-	10
340N/500E																				
chert	-	-	1	-	1	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-
quartz	1	2	6	-	5	1	-	1	16	-	-	-	-	-	16	-	-	-	-	-
meta	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
TOTAL	1	-	7	-	7	1	-	1	19	-	-	-	-	-	19	1	5	-	5	58
340N/530E																				
chert	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-
quartz	-	-	5	-	6	2	-	-	13	1	-	-	-	1	14	-	-	-	-	-
meta	-	-	1	-	1	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-
TOTAL	-	-	6	-	7	3	-	-	16	1	-	-	-	1	17	1	10	1	4	63
360N/450E																				
chert	-	-	1	-	2	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-
quartz	-	-	2	-	2	4	-	-	8	-	-	-	-	-	8	-	-	-	-	-
meta	-	-	-	-	3	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-
TOTAL	-	-	3	-	7	4	-	-	14	-	-	-	-	-	14	-	6	113	20	153
360N/500N																				
chert	-	-	1	-	3	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-
quartz	-	2	11	-	4	-	-	-	17	-	-	-	-	-	17	-	-	-	-	-
meta	-	-	3	-	2	-	-	-	5	-	-	-	-	-	5	-	35	-	2	66
TOTAL	-	-	15	-	9	-	-	-	26	-	-	-	-	-	26	-	3	-	-	-
380N/450E																				
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
quartz	-	3	-	-	1	-	-	-	4	-	-	1	1	2	6	-	-	-	-	-
meta	1	-	1	-	2	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-
TOTAL	1	-	1	-	3	-	-	-	8	-	-	1	1	2	10	-	6	54	104	177
400N/500E																				
chert	-	1	1	-	2	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-
quartz	1	3	6	-	5	1	-	1	17	-	-	-	-	-	17	-	-	-	-	-
meta	-	-	1	-	4	-	-	-	5	-	-	-	-	-	5	-	11	-	28	71
TOTAL	1	-	8	-	11	1	-	1	26	-	-	-	-	-	26	-	6	-	-	-



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	FGR ROCK	CER	HIST	GRND TOT
420N/450E																				
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
quartz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	14
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
420N/500E																				
chert	-	-	-	-	2	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-
quartz	1	1	5	3	1	6	2	-	19	-	-	-	-	-	19	-	-	-	-	-
meta	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
TOTAL	1	1	6	3	3	6	2	-	22	-	-	-	-	-	22	-	2	44	1	4
440N/450E																				
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
quartz	-	-	5	-	-	-	-	-	5	-	-	-	-	-	5	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	18	47
TOTAL	-	-	5	-	-	-	-	-	5	-	-	-	-	-	5	-	-	-	-	-
440N/500E																				
chert	-	-	2	-	2	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-
quartz	-	7	8	3	4	6	1	1	30	-	-	-	-	-	30	-	-	-	-	-
meta	-	-	2	-	1	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-
TOTAL	-	7	12	3	7	6	1	1	37	-	-	-	-	-	37	1	5	88	-	4
460N/450E																				
chert	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
quartz	2	-	7	-	4	1	-	-	14	-	-	-	-	-	14	-	-	-	-	-
meta	-	-	-	-	1	-	-	-	1	1	-	-	-	1	2	-	-	-	-	-
TOTAL	2	-	7	-	6	1	-	-	16	1	-	-	-	1	17	-	19	190	-	32
460N/500E																				
chert	-	-	-	-	5	-	-	-	5	-	-	-	-	-	5	-	-	-	-	-
quartz	-	2	34	3	24	6	-	1	70	1	-	1	-	2	72	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1	-	-	-	-	-
TOTAL	-	-	34	3	29	6	-	1	75	1	1	1	-	3	78	-	8	42	-	11
480N/450E																				
chert	-	-	-	-	4	-	-	-	4	1	-	-	-	1	5	-	-	-	-	-
quartz	2	3	9	5	4	6	-	-	29	-	-	-	-	-	29	-	-	-	-	-
meta	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
TOTAL	2	-	10	5	8	6	-	-	34	1	-	-	-	1	35	1	16	74	1	6
																				133



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	UD ROCK	CER	HIST	GRND TOT
480N/500E																				
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
quartz	4	4	8	-	9	5	-	-	30	-	-	-	1	1	31	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	4	4	8	-	9	5	-	-	30	-	-	-	1	1	31	-	8	3	2	81
500N/440E																				
chert	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
quartz	1	2	9	2	6	-	-	-	20	-	-	-	-	-	20	-	-	-	-	-
meta	-	-	3	-	2	-	-	-	5	-	-	-	-	-	5	-	-	-	-	-
TOTAL	1	2	12	2	9	-	-	-	26	-	-	-	-	-	26	-	11	-	3	158
500N/450E																				
chert	-	-	1	-	3	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-
quartz	1	2	7	-	6	1	-	-	17	-	-	-	1	1	18	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1	2	8	-	9	-	-	-	21	-	-	-	1	1	22	-	10	1	3	106
500N/460E																				
chert	-	-	-	-	4	-	-	-	4	-	-	-	1	1	5	-	-	-	-	-
quartz	-	8	13	-	7	4	-	-	32	-	-	-	-	-	32	-	-	-	-	-
meta	-	-	-	-	3	-	-	-	3	1	-	-	-	1	4	-	3	2	-	94
TOTAL	-	2	13	-	14	4	-	-	39	1	-	-	1	2	41	-	48	2	-	-
500N/480E																				
chert	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
quartz	-	2	12	-	-	-	-	-	14	-	-	-	-	-	14	-	-	-	-	-
meta	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
TOTAL	-	2	13	-	1	-	-	-	16	-	-	-	-	-	16	1	77	1	-	95
500N/500E																				
chert	-	-	2	-	1	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-
quartz	1	3	9	-	5	4	1	-	23	-	-	-	-	-	23	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1	3	11	-	6	4	1	-	26	-	-	-	-	-	26	-	6	-	1	45
500N/510E																				
chert	-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-
quartz	-	-	12	-	3	4	2	-	21	-	-	-	2	2	23	-	-	-	-	-
meta	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
TOTAL	-	-	15	-	3	4	2	-	24	-	-	-	2	2	26	-	19	1	4	50



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	FCR	ROCK	CER	HIST	GRND TOT
520N/450E																					
chert	-	-	1	-	1	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
quartz	-	1	4	-	5	6	-	-	16	-	-	-	-	-	16	-	-	-	-	-	-
meta	-	-	2	-	-	-	-	1	3	-	-	-	-	-	3	-	-	-	-	-	-
TOTAL	-	1	7	-	6	6	-	1	21	-	-	-	-	-	21	-	7	191	3	4	226
520N/500E																					
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
quartz	-	1	10	2	9	4	-	-	26	-	-	-	-	-	26	-	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	1	10	2	9	4	-	-	26	-	-	-	-	-	26	-	5	37	-	1	69
540N/500E																					
chert	-	-	1	-	3	-	-	-	4	-	-	-	1	1	5	-	-	-	-	-	-
quartz	-	3	16	4	4	5	-	-	32	-	-	-	-	-	32	-	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	3	17	4	7	5	-	-	36	-	-	-	1	1	37	-	13	59	1	6	116
340N/488E																					
chert	-	-	2	-	5	-	-	-	7	-	-	-	1	1	8	-	-	-	-	-	-
quartz	-	3	8	-	7	4	-	1	23	-	-	-	-	-	23	-	-	-	-	-	-
meta	-	-	-	-	4	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-
TOTAL	-	3	10	-	16	4	-	1	34	-	-	-	1	1	35	-	3	48	-	7	93
340N/498E																					
chert	-	-	1	-	1	2	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-
quartz	-	-	3	-	1	1	-	-	5	-	-	-	-	-	5	-	-	-	-	-	-
meta	-	-	5	-	3	6	-	-	14	-	-	-	-	-	14	-	-	-	-	-	-
TOTAL	-	-	9	-	5	9	-	-	23	-	-	-	-	-	23	6	-	53	-	-	82
360N/451E																					
chert	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
quartz	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
meta	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
TOTAL	-	-	2	-	-	1	-	-	3	-	-	-	-	-	3	-	-	2	-	-	5
360N/461E																					
chert	-	-	1	-	-	1	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
quartz	-	-	-	-	-	5	-	-	5	-	-	-	-	-	5	-	-	-	-	-	-
meta	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
TOTAL	-	-	2	-	-	6	-	-	8	-	-	-	-	-	8	-	-	-	-	1	9



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	FCR	ROCK	CER	HIST	GRND TOT
382N/496E																					
chert	-	-	-	-	2	-	-	-	2	-	-	-	-	-	2						
quartz	2	3	5	-	6	2	1	-	19	-	-	1	1	2	21						
meta	-	-	1	-	3	-	-	-	4	-	-	-	-	-	4						
TOTAL	2	3	6	-	11	2	1	-	25	-	-	1	1	2	27	1	5	20	-	15	68
382N/506E																					
chert	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1						
quartz	-	6	10	-	5	-	-	-	21	-	-	-	-	-	21						
meta	-	-	2	-	2	-	-	-	4	1	-	1	-	2	6						
TOTAL	-	6	13	-	7	-	-	-	26	1	-	1	-	2	28	-	5	16	-	15	64
400N/496E																					
chert	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1						
quartz	-	1	1	-	-	10	-	1	13	-	-	-	-	-	13						
meta	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1						
TOTAL	-	1	2	-	-	10	-	1	14	1	-	-	-	1	15	-	-	3	-	-	18
400N/506E																					
chert	-	-	1	-	-	1	-	-	2	-	-	-	1	1	3						
quartz	-	-	2	1	-	8	-	-	11	-	1	-	-	1	12						
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
TOTAL	-	-	3	1	-	9	-	-	13	-	1	-	1	2	15	-	-	12	-	5	32
422N/484E																					
chert	-	-	-	-	4	-	-	-	4	1	-	-	-	1	5						
quartz	-	-	7	-	3	6	-	-	16	-	-	1	1	2	18						
meta	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1						
TOTAL	-	-	7	-	7	6	-	1	21	1	-	1	1	3	24	-	6	61	-	14	105
422N/494E																					
chert	-	-	-	-	3	-	-	-	3	-	-	-	-	-	3						
quartz	-	3	7	2	5	-	-	1	18	-	-	-	-	-	18						
meta	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1						
TOTAL	-	3	7	2	8	-	-	2	22	-	-	-	-	-	22	-	7	38	-	8	75
422N/504E																					
chert	-	-	-	-	4	-	-	-	4	-	-	-	-	-	4						
quartz	-	2	9	-	8	7	-	1	27	-	-	2	3	5	32						
meta	-	-	1	-	3	-	-	-	4	-	-	-	-	-	4						
TOTAL	-	2	10	-	15	7	-	1	35	-	-	2	3	5	40	-	14	55	-	7	116



PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	FCR	UD ROCK	CER	HIST	GRND TOT
440N/447E																				
-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
-	-	1	-	1	6	1	-	9	-	-	-	-	-	9	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	1	-	2	6	1	-	10	-	-	-	-	-	10	-	-	-	-	32	42
440N/457E																				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1	-	-	1	-	-	-	1	1	2	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1	-	-	1	-	-	-	1	1	2	-	-	2	-	27	31
440N/467E																				
-	-	-	-	2	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
-	1	6	-	1	-	-	-	8	1	-	-	-	1	9	-	-	-	-	-	-
-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
-	1	7	-	3	-	-	-	11	1	-	-	-	1	12	-	-	2	-	29	43
440N/477E																				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	8	9
441N/496E																				
-	-	-	-	2	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
-	1	2	-	1	13	-	-	17	-	-	-	3	3	20	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	1	2	-	3	13	-	-	19	-	-	-	3	3	22	2	3	5	-	1	33
441N/506E																				
-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
-	-	6	-	2	-	1	-	9	-	-	-	-	-	9	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	7	-	2	-	1	-	10	-	-	-	-	-	10	-	-	12	-	1	23
462N/485E																				
-	-	-	-	2	-	-	-	2	-	-	-	1	1	3	-	-	-	-	-	-
-	1	5	2	1	19	-	2	30	-	-	-	5	5	35	-	-	-	-	-	-
-	-	2	-	-	-	-	-	2	-	-	-	3	3	5	-	-	-	-	-	-
-	1	7	2	3	19	-	2	34	-	-	-	9	9	43	-	2	18	-	17	80



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	UD ROCK	CER	HIST	GRND TOT
462N/495E																				
chert	-	-	1	-	1	1	-	-	3	-	-	-	-	-	3					
quartz	-	-	12	-	5	23	2	2	44	-	-	-	3	3	47					
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
TOTAL	-	-	13	-	6	24	2	2	47	-	-	-	3	3	50	1	21	-	3	75
462N/505E																				
chert	-	-	-	-	4	-	-	-	4	1	-	-	1	2	6					
quartz	4	3	33	-	18	7	-	5	70	-	-	1	-	1	71					
meta	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1					
TOTAL	4	3	33	-	23	7	-	5	75	1	-	1	1	3	78	-	17	-	9	110
481N/440E																				
chert	-	-	1	-	1	3	-	-	5	-	-	-	2	2	7					
quartz	-	1	2	1	5	14	1	1	25	-	-	1	1	2	27					
meta	-	-	2	-	-	2	-	-	4	-	-	-	-	-	4					
TOTAL	-	1	5	1	6	19	1	1	34	-	-	1	3	4	38	-	23	-	3	69
481N/450E																				
chert	-	-	1	-	1	-	-	-	2	-	-	-	-	-	2					
quartz	-	-	11	-	2	26	-	-	39	-	-	-	1	1	40					
meta	-	-	-	-	-	3	-	-	3	-	-	-	-	-	3					
TOTAL	-	-	12	-	3	29	-	-	44	-	-	-	1	1	45	-	10	-	2	57
481N/460E																				
chert	-	-	-	-	1	-	-	-	1	-	-	-	1	1	2					
quartz	-	1	8	2	4	14	-	-	29	-	-	-	2	2	31					
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		18	-	5	56
TOTAL	-	1	8	2	5	14	-	-	30	-	-	-	3	3	33	-	-	-	-	-
481N/470E																				
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
quartz	-	-	5	-	-	10	-	-	15	-	-	-	-	-	15					
meta	-	-	1	-	-	1	-	-	2	-	-	-	-	-	2					
TOTAL	-	-	6	-	-	11	-	-	17	-	-	-	-	-	17	-	21	-	1	39
482N/490E																				
chert	-	-	-	-	3	-	-	-	3	-	-	-	-	-	3					
quartz	-	2	8	-	3	-	-	1	14	-	-	1	1	2	16					
meta	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1		6	-	-	31
TOTAL	-	2	8	-	6	-	-	2	18	-	-	1	1	2	20	-	5	-	-	-



PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	FCR	UD ROCK	CER	HIST	GRND TOT
482N/400E																				
-	-	1	-	2	4	-	-	7	-	-	-	-	-	7	-	-	-	-	-	-
-	-	3	-	2	20	-	-	25	-	-	-	-	-	25	-	-	-	-	-	-
-	-	1	-	1	1	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-
-	-	5	-	5	25	-	-	35	-	-	-	-	-	35	1	-	11	-	2	49
482N/510E																				
-	-	-	-	3	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-
1	3	10	3	6	1	-	-	24	-	-	-	1	1	25	-	-	-	-	-	-
-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
1	3	12	3	9	1	-	-	29	-	-	-	1	1	30	1	5	11	1	-	48
491N/490E																				
-	-	-	-	3	-	-	-	3	2	-	-	-	2	5	-	-	-	-	-	-
-	-	3	-	2	16	-	-	21	2	-	-	-	2	23	-	-	-	-	-	-
-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
-	-	5	-	5	16	-	-	26	4	-	-	-	4	30	1	-	8	-	2	41
491N/500E																				
-	-	-	-	2	1	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-
-	-	8	-	3	21	-	1	33	-	-	1	1	2	35	-	-	-	-	-	-
-	-	4	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-
-	-	12	-	5	22	-	1	40	-	-	1	1	2	42	2	-	8	2	1	55
491N/510E																				
-	-	-	-	4	-	-	-	4	1	-	-	-	1	5	-	-	-	-	-	-
-	-	4	-	-	21	-	1	26	-	-	-	-	-	26	-	-	-	-	-	-
-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
-	-	4	-	5	21	-	1	31	1	-	-	-	1	32	-	12	-	-	-	44
491N/520E																				
-	-	-	-	1	1	-	-	2	1	-	-	-	1	3	-	-	-	-	-	-
-	-	3	-	2	9	-	-	14	-	-	-	1	1	15	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	3	-	3	10	-	-	16	1	-	-	1	2	18	-	10	2	-	-	30
500N/458E																				
-	-	2	-	4	-	-	-	6	-	-	-	-	-	6	-	-	-	-	-	-
-	-	5	-	2	21	-	-	28	1	-	-	-	1	29	-	-	-	-	-	-
-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
-	-	7	-	6	22	-	-	35	1	-	-	-	1	36	-	9	-	-	4	49



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	UD ROCK	CER	HIST	GRND TOT
500N/491E																				
chert	-	-	-	-	3	-	-	-	3	-	-	-	-	-	3					
quartz	3	6	5	2	5	1	-	-	22	-	-	-	-	-	22					
meta	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1					
TOTAL	3	6	5	2	9	1	-	-	26	-	-	-	-	-	26	1	58	-	1	91
500N/501E																				
chert	-	-	-	-	4	-	-	-	4	-	-	-	-	-	4					
quartz	5	1	12	2	7	1	1	1	30	-	-	1	1	2	32					
meta	-	-	-	-	3	-	-	1	4	-	-	-	-	-	4					
TOTAL	5	1	12	2	14	1	1	2	38	-	-	1	1	2	40	-	60	3	-	107
500N/511E																				
chert	-	-	1	-	4	-	-	-	5	-	-	-	-	-	5					
quartz	2	3	10	-	6	7	-	1	29	-	-	2	-	2	31					
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
TOTAL	2	3	11	-	10	7	-	1	34	-	-	2	-	2	36	-	19	1	2	58
510N/500E																				
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
quartz	-	3	3	-	2	15	-	1	24	-	-	-	-	-	24					
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
TOTAL	-	3	3	-	2	15	-	1	24	-	-	-	-	-	24	-	10	-	-	36
510N/510E																				
chert	-	-	-	-	1	-	-	-	1	-	1	-	-	1	2					
quartz	-	-	-	2	2	9	-	1	14	-	1	-	-	1	15					
meta	-	-	-	2	-	-	-	-	2	-	-	-	-	-	2					
TOTAL	-	-	-	4	3	9	-	1	17	-	2	-	-	2	19	-	2	1	1	23
520N/465E																				
chert	-	-	1	-	3	-	-	-	4	-	-	-	-	-	4					
quartz	2	4	3	2	5	4	1	-	21	-	-	-	2	2	23					
meta	-	-	1	-	-	-	-	1	2	-	-	-	-	-	2					
TOTAL	2	4	5	2	8	4	1	1	27	-	-	-	2	2	29	-	51	1	3	89
520N/475E																				
chert	-	-	1	-	5	-	-	-	6	-	-	-	1	1	7					
quartz	-	-	12	-	8	3	2	-	25	1	-	-	1	2	27					
meta	-	-	1	-	3	-	-	-	4	-	-	-	-	-	4					
TOTAL	-	-	14	-	16	3	2	-	35	1	-	-	2	3	38	-	80	1	2	132



PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	FCR	UD ROCK	CER	HIST	GRND TOT
520N/535E																				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	3	-	5	8	-	-	18	-	-	1	1	2	20	-	-	-	-	-	-
-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
2	-	5	-	5	8	-	-	20	-	-	1	1	2	22	-	5	96	-	2	125
520N/445E																				
-	-	1	-	4	-	-	-	5	-	-	-	-	-	5	-	-	-	-	-	-
2	2	15	-	7	7	1	1	35	-	-	-	3	3	38	-	-	-	-	-	-
-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
2	2	18	-	11	7	1	1	42	-	-	-	3	3	45	1	7	97	4	9	163
520N/455E																				
-	-	3	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-
1	1	9	-	1	2	-	-	14	-	-	-	2	2	16	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	1	12	-	1	2	-	-	17	-	-	-	2	2	19	-	13	78	1	-	111
521N/495E																				
-	-	1	-	1	1	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-
-	-	5	-	-	10	-	1	16	-	-	1	-	1	17	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	6	-	1	11	-	1	19	-	-	1	-	1	20	1	-	4	2	-	27
521N/505E																				
-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-
-	-	-	5	3	26	-	-	34	-	-	-	4	4	38	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	5	3	26	-	-	34	-	-	-	6	6	40	1	-	6	-	-	47
521N/515E																				
-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-
2	-	3	-	2	5	-	1	13	-	-	-	-	-	13	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	3	-	2	5	-	1	13	1	-	-	-	1	14	-	10	7	2	2	35
537N/495E																				
-	-	-	-	2	1	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-
-	1	2	-	5	13	-	2	23	-	-	-	1	1	24	-	-	-	-	-	-
-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
-	1	2	-	7	15	-	2	27	-	-	-	1	1	28	1	-	30	-	3	62



	PRI FLK	SEC FLK	INT FLK	BIP FLK	BTF	SHTR	CORE	PRE FORM	TOT DEB	PP/K	BIF	FLK TL	UTL FLK	TOT TL	TOT LITH	GRND STN	FCR	UD ROCK	CER	HIST	GRND TOT
537N/505E																					
chert	-	-	2	-	3	-	-	-	5	-	-	-	-	-	5	-	-	-	-	-	-
quartz	-	-	2	-	1	15	-	-	18	-	-	-	-	-	18	-	-	-	-	-	-
meta	-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
TOTAL	-	-	6	-	4	15	-	-	25	-	-	-	-	-	25	-	2	16	-	1	44
537N/515E																					
chert	-	-	-	-	4	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-
quartz	-	-	1	-	3	16	-	-	20	-	-	-	-	-	20	-	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	1	-	7	16	-	-	24	-	-	-	-	-	24	-	-	14	2	-	40
540N/448E																					
chert	-	-	1	-	5	1	-	-	7	-	-	-	-	-	7	-	-	-	-	-	-
quartz	-	1	2	-	-	10	-	-	13	-	1	1	1	3	16	-	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	1	3	-	5	11	-	-	20	-	1	1	1	3	23	-	-	-	-	-	23
540N/458E																					
chert	-	-	-	-	4	-	-	-	4	-	-	-	1	1	5	-	-	-	-	-	-
quartz	-	1	7	-	3	15	-	-	26	-	-	-	2	2	28	-	-	-	-	-	-
meta	-	-	3	-	1	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-
TOTAL	0	1	10	-	8	15	-	-	34	-	-	-	3	3	37	1	-	19	-	3	60
560N/440E																					
chert	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
quartz	-	5	9	-	4	3	-	-	21	-	-	-	-	-	21	-	-	-	-	-	-
meta	-	-	1	-	1	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-
TOTAL	-	5	10	-	6	3	-	-	24	-	-	-	-	-	24	-	4	12	-	-	40
560N/455E																					
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
quartz	-	-	6	-	-	4	-	-	10	-	-	-	-	-	10	-	-	-	-	-	-
meta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	6	-	-	4	-	-	10	-	-	-	-	-	10	-	-	14	-	2	26
560N/465E																					
chert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
quartz	-	3	11	-	3	5	1	-	23	-	-	-	1	1	24	-	-	-	-	-	-
meta	-	-	2	-	-	-	-	-	2	-	-	-	1	1	2	-	-	-	-	-	-
TOTAL	-	3	13	-	3	5	1	-	25	-	-	-	1	1	26	-	-	17	-	4	51



## **APPENDIX C: BLOCK ARTIFACT INVENTORY**







Table C2. Block B Artifact Inventory, 9Ri158.

	462N 507E	462N 508E	462N 509E	463N 507E	463N 508E	463N 509E	464N 507E	464N 508E	464N 509E	465N 507E	465N 508E	465N 509E	TOTAL
LEVEL 1: MIDDEN ZONE													
PRI FLK	4	-	2	-	-	1	6	-	1	8	1	3	26
SEC FLK	10	9	11	9	14	14	6	12	16	9	6	7	123
INT FLK	21	23	19	32	17	29	28	25	23	22	16	22	277
BIP FLK	6	3	2	-	-	4	4	1	6	-	1	2	29
BTF	31	34	17	19	25	48	61	26	50	27	26	50	414
SHTR	-	1	1	-	2	5	10	4	7	-	3	5	38
CORE	1	1	-	1	-	-	-	1	-	3	-	-	7
PREFORM	2	1	2	3	2	1	2	1	1	-	-	-	15
PP/K	1	1	-	1	-	-	2	-	-	1	-	-	6
BIF	-	-	-	-	-	2	-	1	-	-	-	1	4
FLK TL	-	-	-	1	-	-	-	-	1	1	1	-	4
UTL FLK	2	2	3	3	-	5	2	3	-	1	2	1	24
TOT LITH	78	75	57	69	60	109	121	74	105	72	56	91	967
GRND STN	2	1	-	2	1	1	1	-	2	-	-	-	10
FCR	20	3	9	3	6	11	17	14	15	17	6	10	131
UD ROCK	47	13	29	9	3	44	33	25	53	44	8	14	322
CER	-	-	1	-	-	-	-	-	2	-	1	-	4
HIST	2	3	-	4	1	6	6	3	9	-	1	3	38
FAUNAL	-	-	4	1	-	-	-	-	-	-	1	-	6
TOTAL	149	95	100	88	71	171	178	116	186	133	73	118	1478
LEVEL 2: MIDDEN ZONE													
PRI FLK	2	2	-	2	1	-	-	-	2	-	-	-	9
SEC FLK	9	3	2	7	4	3	2	-	3	-	6	-	39
INT FLK	5	3	4	15	11	9	9	10	10	1	16	3	96
BIP FLK	1	-	-	-	-	1	2	3	-	-	3	1	11
BTF	10	10	9	26	13	11	2	18	8	1	22	11	141
SHTR	4	-	1	2	2	2	5	2	-	1	-	-	19
CORE	-	3	-	-	1	-	1	-	-	-	1	2	8
PREFORM	-	1	-	-	1	-	-	-	-	-	-	-	2
PP/K	-	-	-	-	1	-	-	-	-	1	-	-	2
BIF	-	-	-	-	-	-	-	-	-	-	-	-	-
FLK TL	-	-	1	-	-	-	2	-	2	1	-	-	6
UTL FLK	3	-	1	1	4	1	4	3	-	-	-	-	17
TOT DEB	34	22	18	53	38	27	27	36	25	5	48	17	350
GRND STN	-	-	-	-	-	-	-	-	-	-	-	-	-
FCR	14	9	3	6	1	1	6	3	2	-	9	-	54
UD ROCK	34	5	5	12	5	11	9	7	22	1	2	5	118
CER	-	-	-	-	-	-	-	-	-	-	-	-	-
HIST	-	-	-	-	-	-	-	-	-	-	-	-	-
FAUNAL	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	82	36	26	71	44	39	42	46	49	6	59	22	522
GRND TOT	231	131	126	159	115	210	220	162	235	139	132	140	2000



Table C3. Block C Artifact Inventory, 9Ri158.

	502N 507E	502N 508E	502N 509E	503N 507E	503N 508E	503N 509E	504N 507E	504N 508E	504N 509E	TOTAL
PRI FLK	3	1	2	1	-	3	4	2	1	17
SEC FLK	6	4	1	2	3	4	4	4	-	28
INT FLK	17	8	15	10	4	8	17	8	5	92
BIP FLK	-	-	2	-	1	-	2	2	2	9
BTF	14	4	13	7	5	20	22	17	12	114
SHTR	4	3	-	1	1	-	-	1	-	10
CORE	-	-	1	-	-	-	-	-	-	1
PREFORM	1	2	1	-	-	1	-	1	-	6
PP/K	-	-	-	-	-	-	1	-	-	1
BIF	-	-	-	-	-	-	-	-	-	-
FLK TL	-	-	-	-	-	-	1	1	-	2
UTL FLK	1	-	-	1	1	1	1	-	-	5
TOT LITH	46	22	35	22	15	37	52	36	20	285
GRND STN	-	-	-	-	-	1	1	-	-	2
FCR	1	9	3	2	1	2	-	1	5	24
UD ROCK	5	2	3	5	5	-	16	23	-	59
CER	-	-	-	-	-	-	-	-	1	1
HIST	-	-	-	-	-	-	-	-	-	-
FAUNAL	-	-	-	-	-	-	-	-	-	-
GRND TOT	52	33	41	29	21	40	69	60	26	371



Table C4. Block D Artifact Inventory, 9Ri158.

	397N 501E	397N 502E	398N 500E	397N 501E	398N 502E	399N 500E	399N 501E	399N 502E	397N 500E	TOTAL
PRI FLK	4	1	2	-	1	1	-	2	-	11
SEC FLK	3	1	2	-	1	1	2	2	-	12
INT FLK	10	3	8	2	9	3	11	5	9	60
BIP FLK	3	-	-	-	1	-	2	1	-	7
BTF	2	4	7	-	10	6	8	16	4	57
SHTR	-	1	-	1	1	5	3	4	3	18
CORE	-	-	-	-	-	-	-	-	-	-
PREFORM	1	-	1	-	1	-	-	-	-	3
PP/K	-	-	-	-	-	-	-	1	-	1
BIF	-	-	-	-	-	-	-	-	-	-
FLK TL	2	-	-	-	-	-	-	-	-	2
UTL FLK	2	2	-	-	1	-	1	1	-	7
TOT DEB	27	12	20	3	25	16	27	32	16	178
GRND STN	-	1	1	-	-	-	-	-	-	2
FCR	9	2	2	-	1	4	1	-	1	20
UD ROCK	18	11	10	7	17	13	16	15	2	109
CER	-	-	-	-	1	-	-	-	-	1
HIST	5	1	1	1	5	-	2	4	6	25
FAUNAL	12	2	-	-	7	1	1	1	-	26
GRND TOT	71	29	34	11	56	34	47	52	27	361



Table C5. Block E Artifact Inventory, 9Ri158.

	44N 502E	544N 503E	545N 502E	545N 503E	TOTAL
PRI FLK	4	-	1	2	7
SEC FLK	2	4	3	4	13
INT FLK	18	15	10	11	54
BIP FLK	2	-	-	-	2
BTF	11	18	15	12	56
SHTR	3	-	-	-	3
CORE	-	1	-	-	1
PREFORM	1	-	-	-	1
PP/K	1	-	-	-	1
BIF	-	-	-	-	-
FLK TL	-	1	-	-	1
UTL FLK	1	1	-	1	3
TOT DEB	43	40	29	30	142
GRND STN	1	-	-	-	1
FCR	1	1	-	-	2
UD ROCK	50	5	3	14	72
CER	-	3	-	1	4
HIST	-	-	-	-	-
FAUNAL	1	-	-	-	1
GRND TOT	96	49	32	45	222